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A Taxonomic Study on the Subgenus *Neoceble* (Coleoptera: Leiodidae: *Agathidium*) from Kyushu, Japan*

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Two new species, *Agathidium* (*Neoceble*) *naturale* sp. nov. and *A. (N.) multitodum* sp. nov., and a new subspecies, *A. (N.) omogoense yamaokai* subsp. nov., are described with illustrations of important features. *Anisotoma japonica* Portevin, 1908 is synonymized with *A. (N.) dubium* Portevin, 1908. A key to 10 species of the subgenus *Neoceble* in Kyushu is given.

Key Words: *Neoceble*, *Agathidium*, Leiodidae, new species, new subspecies, Kyushu, Japan.

Introduction

The subgenus *Neoceble* belongs to the genus *Agathidium* of the family Leiodidae and comprises 75 species recorded from the Palaearctic region (Angelini and Švec 1994, 1998; Angelini 1995; Hoshina 1997; Angelini and De Marzo 1998b; Fujimori 1998). From Japan, Portevin (1908) made the first study of the taxonomy of *Neoceble*, describing five new species, and later Portevin (1927) provided keys to seven Japanese species. Long after these studies, Angelini and De Marzo (1990) described six new and one unrecorded species from Japan; they also provided a key to all Japanese species and many illustrations of aedeagi for the purpose of species identification. In recent years, Hoshina (1997) and Fujimori (1998) described two species from Honshu and one species from Shikoku, respectively. As a result, the number of species of *Neoceble* totals 17 for Japan. The study by Angelini and De Marzo (1990) was, however, based only on specimens collected from Shikoku and Honshu, and those from Kyushu were not examined. Hisamatsu (1985) had recorded three species, *Agathidium* (*Neoceble*) *crassicorne* Portevin, 1908, *A. (N.) ciliatum* Portevin, 1908, and *A. (N.) derispioides* Nakane, 1954 from Kyushu, but the former two species were transferred later by Angelini (1986) to the subgenera *Agathidium* and *Microceble*, respectively. Consequently, *A. (N.) derispioides* has been the only species of the subgenus *Neoceble* recorded until now from Kyushu.

Recently, I had an opportunity to examine some specimens of this subgenus collected from Kyushu and found 10 species including two new species and one new subspecies. In order to present these findings which clarify the fauna of this subgenus in Kyushu, the new species and subspecies are described in this paper,

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and a key to the 10 species and their distribution record are presented.

Materials and Methods

Specimens examined in the present study were collected by me and the other entomologists indicated in the acknowledgments. Figures of new taxa are based only holotypes and paratypes. Detailed methods for the collection and preparation of specimens are similar to those described in Hoshina (1998). Holotypes and some paratypes described in the present paper are preserved in the collection of the Entomological Laboratory, Kyushu University.

Systematics

Subgenus *Neoceble* Gozis, 1886

Neoceble Gozis, 1886: 16 (type species: *Anisotoma plagiatum* Gyllenhal, 1810); Ganglbauer 1899: 242-243, 245-250 (key to Middle European species); Reitter 1909: 257-258 (key to Middle European species); Jacobson 1910: 623-624; Portevin 1914: 228-229 (key to Japanese species); 1927: 87-91, 94 (key to Japanese species); Hatch 1929: 72-78; Hatch 1936: 39-40; Hlisenkovský 1964: 33-118 (key to species); Peez 1971: 262-264 (key to Middle European species); Angelini and De Marzo 1981: 122-123, 125-132, 135-136 (key to Spanish species); 1983a: 20-23, 26-50 (key to species of North Africa and Canary Islands); 1983b: 51-54, 61-69 (key to Turkish species); Angelini 1984: 10, 12-13 (key to Mongolian species); Angelini and De Marzo 1984: 347-356 (key to Central African species); Angelini 1986: 148-153 (=subgenus *Stigmoceble* Hlisenkovský, 1964); Angelini and De Marzo 1987: 7-10, 16-23 (key to Greek species); Nunberg 1987: 46-50 (key to Polish species); Angelini 1988: 312-327, 344-348 (key to Italian species); Angelini and De Marzo 1988: 279, 281-285 (key to Near and Middle Eastern species); Lafer 1989: 326-327 (key to Far East Russian species); Angelini 1990: 94-96, 102-105, 115-118 (key to Caucasian species); Angelini and De Marzo 1990: 51-53, 57, 79-99, 119 (key to Japanese species); Angelini and Švec 1994: 2, 12-14, 30; Angelini 1995: 35, 70-256 (key to Palearctic species); Angelini and De Marzo, 1995: 178, 191-198 (key to Taiwanese species); Angelini and Švec 1995: 510-511 (key to Chinese species); Cooter 1996: 205-206, 220, 224-230 (key to British species); Hoshina 1998: 138, 140 (key to Ryukyuan species); Kilian and Borowiec 1998: 66, 68-72, 79-81, 84, 86-92 (key to Polish species).

Stigmoceble Hlisenkovský, 1964: 119-123 (type species: *Agathidium (Neoceble) longicorne* Portevin, 1908; key to species); Angelini 1986: 149.

See Hatch (1929) and Angelini (1995) for additional synonymy and references.

Diagnosis. Body glabrous, usually concolorous, rarely bicolorous (Figs 1-2); head usually widest at eyes, sometimes widest at temple, and length of temple shorter than 1/3 of long axis of eyes; male left mandible sometimes clearly larger than right, and curved inwardly (Fig. 26) or transformed into a horn shape (Figs 24-25) or bearing a remarkable horn near base (Fig. 13), but these features varying

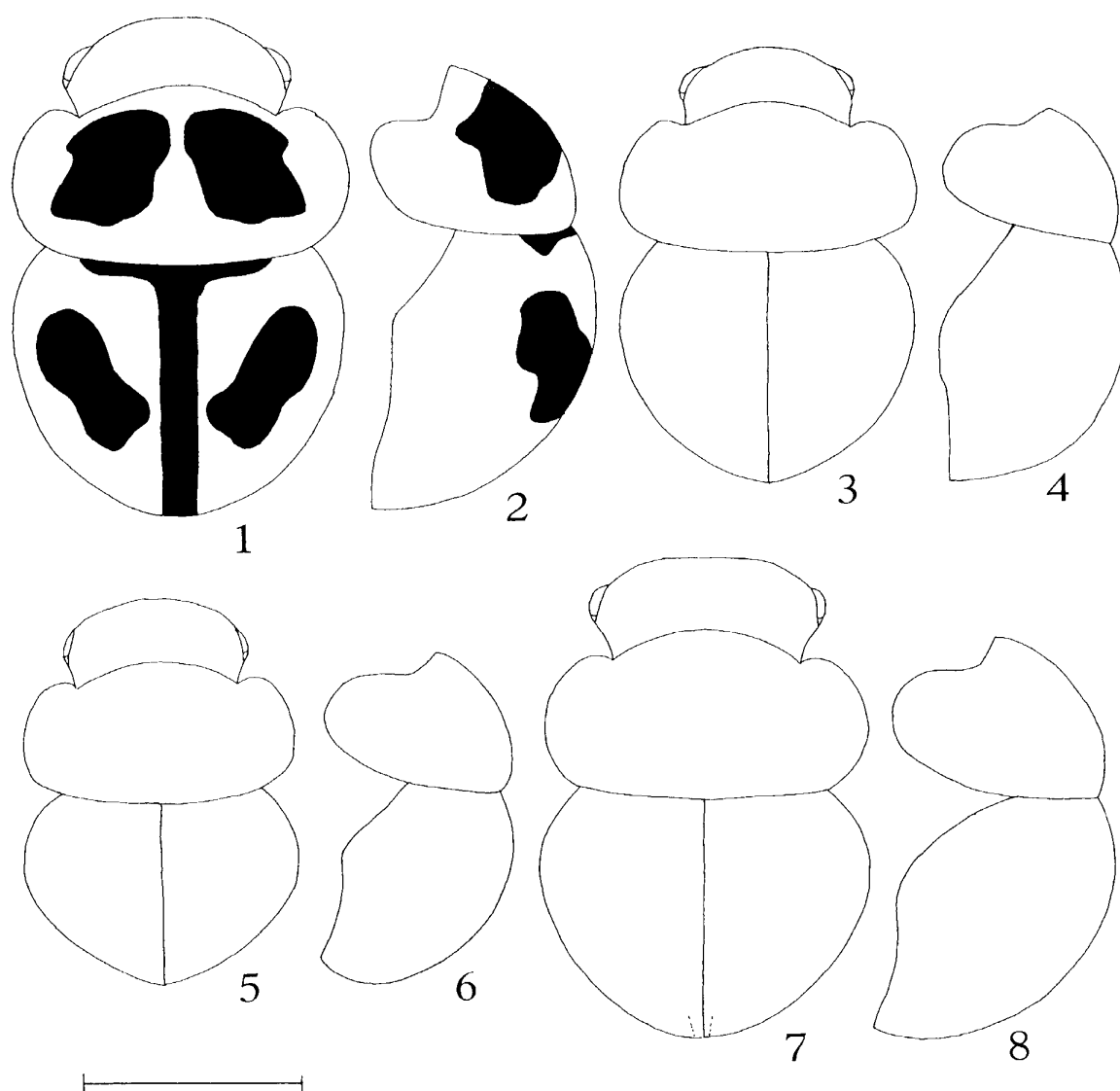
among specimens; female left mandible almost as large as or slightly larger than right; elytra with distinct humeral angle; hind wings normal, or sometimes absent; mesocoxae distant from metacoxae; visible space of metasternum large; femoral line absent.

***Agathidium (Neoceble) derispioides* Nakane, 1954**

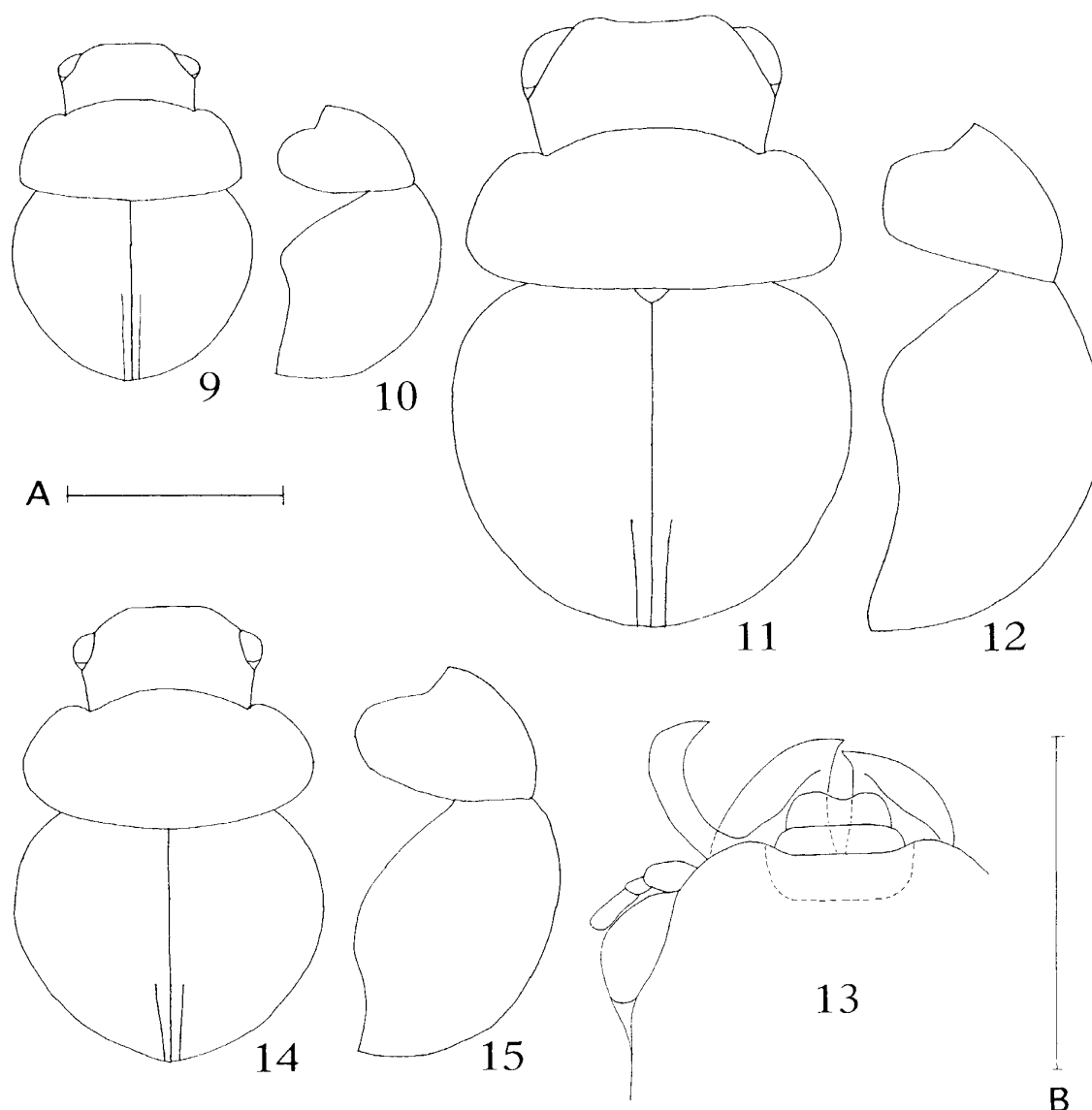
(Japanese name: Semon-maru-tamakinokomushi)

(Figs 1-2, 29, 39-40, 54-55, 67, 77)

Agathidium (Neoceble) derispioides Nakane, 1954: 10 (Japan: Shikoku); 1963: 72, pl. 36, fig. 23; Hisamatsu 1985: 236, pl. 42, fig. 28; Angelini 1986: 149; Angelini and De



Figs 1, 3, 5, 7: body, dorsal view. Figs 2, 4, 6, 8: body, lateral view. 1-2: *Agathidium (Neoceble) derispioides* Nakane; 3-4: *A. (N.) piceolum* Hlisenkovský; 5-6: *A. (N.) naturale* sp. nov.; 7-8: *A. (N.) omogoense yamaokai* subsp. nov. Scale: 1 mm.



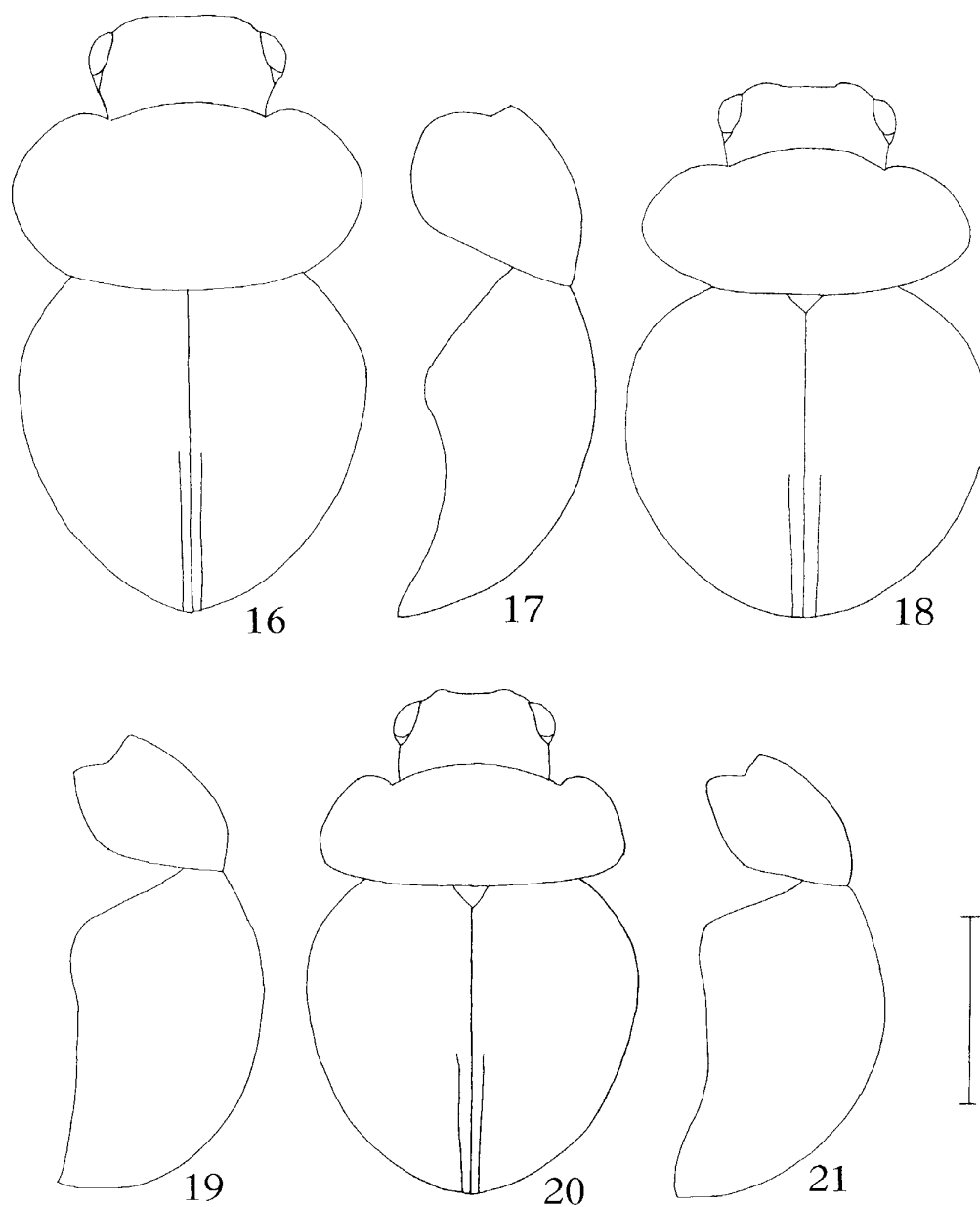
Figs 9, 11, 14: body, dorsal view. Figs 10, 12, 15: body, lateral view. Fig. 13: head, dorsal view. 9-10: *Agathidium (Neoceble) kyotoense* Angelini and De Marzo; 11-13: *A. (N.) multitodum* sp. nov.; 14-15: *A. (N.) aeneum* Angelini and De Marzo. Scale A: 1 mm for Figs 9-12, 14-15. Scale B: 1 mm for Fig. 13.

Marzo 1990: 93; Angelini 1995: 178; Hoshina 1997: 164.

Agathidium (Neoceble) bimaculatum Hlisnikovský, 1964: 56; Angelini 1986: 149
(=*Agathidium (Neoceble) derispioides* Nakane, 1954).

Coloration. Head brown to dark brown, sometimes with black patches on vertex; pronotum and elytra yellowish brown with black patches (Figs 1-2); 1st segment of antennae reddish brown; 2nd-6th segments light brown; 7th-8th segments and apical 1/3 of 11th segment light brown to brown; 9th-10th segments and basal 2/3 of 11th segment brown.

Morphology. Body almost glabrous, convex in general (Fig. 2), about 1.6 times



Figs 16, 18, 20: body, dorsal view. Figs 17, 19, 21: body, lateral view. 16-17: *Agathidium* (*Neoceble*) *longicorne* Portevin; 18-19: *A. (N.) cribratum* Portevin; 20-21: *A. (N.) dubium* Portevin. Scale: 1 mm.

as long as wide (Fig. 1). Head with distinct or indistinct clypeal line, almost impunctate, without microsculptures. Both mandibles almost of same size in both sexes. Third segment of antenna about 1.5 times as long as 2nd (Fig. 29). Pronotum almost as wide as elytra, almost impunctate, without microsculptures. Elytra widest at basal 1/4, almost impunctate, without microsculptures; sutural stria distinct and present in apical 1/4 of elytra. Hind wings normal. Tarsal formula 5-5-4 in male, 4-4-4 in female. Aedeagus varying among specimens, particularly in shape of apical part; apex of median lobe more sharply reflexed in lateral view (Figs 39-40) in specimens collected from Saga Pref., Kyushu, than in those from Shizuoka Pref.,

Honshu, and parameres of the former shorter than those of the latter in ventral view (Figs 54-55). Spermatheca as shown in Fig. 67.

Body length 2.6-3.6 mm.

Distribution. Japan (Kyushu, Shikoku and Honshu).

Specimens examined. 2♀♀, Mt. Kishidake, Saga Pref., Kyushu, 19-III-1988, S. Nomura leg.; 1♂, Mt. Kunimi, Saga Pref., Kyushu, 16-III-1998, S. Nomura leg.; 3 specimens, Mt. Hyohnosen, Hyogo Pref., Honshu, 5-VI-1996, H. Hoshina leg.; 1 specimen, Tentaki, Oya-cho, Hyogo Pref., Honshu, 7-V-1997, H. Hoshina leg.; 2♂♂, 1♀, Mt. Ushiro, Hyogo Pref., Honshu, 10-V-1997, H. Hoshina leg.; 6 specimens, Sessokyo, Honkawane-cho, Shizuoka Pref., Honshu, 9-10-V-1992, T. Kishimoto leg.

Remarks. This species is similar to *Agathidium (Neoceble) yukihiroi* Hoshina, 1997 in appearance, but it is distinguished by having the pronotum colored yellowish brown with black patches. In contrast, *A. (N.) yukihiroi* has the pronotum that is almost completely concolorous, black.

As mentioned in the redescription, the apical part of the aedeagus exhibited different shapes between specimens collected from Kyushu and Honshu (Figs 39-40 and 54-55). Such difference seems to be enough for separating the Kyushu and Honshu populations at the subspecies level, but the former is left unnamed here until further specimens become available for a more detailed comparison.

Agathidium (Neoceble) piceolum Hlisenkovský, 1964
(Japanese name: Tabaruzaka-maru-tamakinokomushi)
(Figs 3-4, 30, 41-42, 56, 68, 77)

Agathidium (Neoceble) piceolum Hlisenkovský, 1964: 115 (Japan: Ichiuchi (Kyushu?)); Angelini and De Marzo 1990: 98; Angelini 1995: 218.

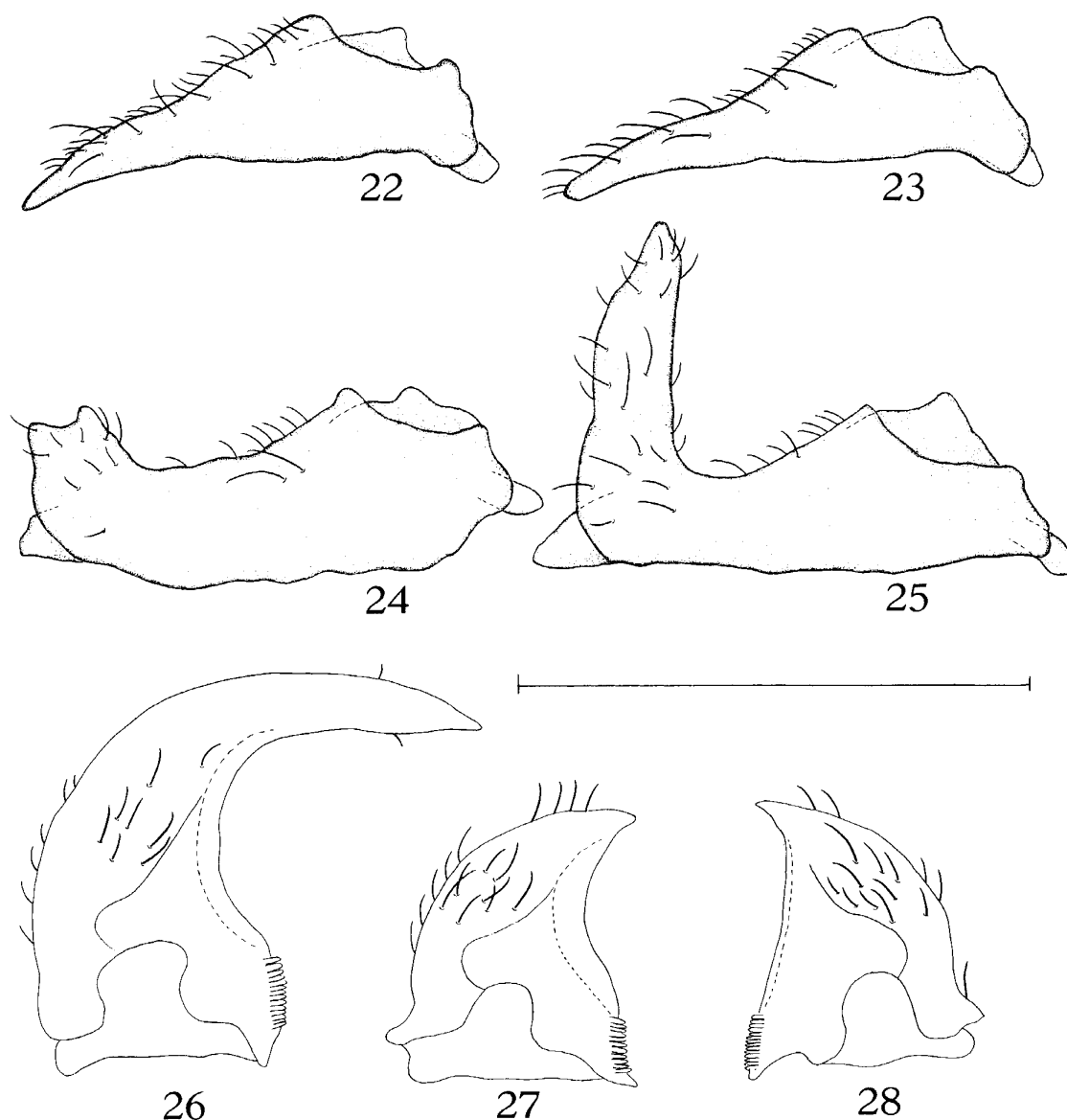
Coloration. Dorsum almost concolorous, brown or black; pronotum with reddish brown or brown margins; 1st segment of antenna reddish brown; 2nd-8th segments and apical 2/5 of 11th segment light brown; 9th-10th segments and basal 3/5 of 11th segment brown.

Morphology. Body almost glabrous, convex in general (Fig. 4), about 1.6 times as long as wide (Fig. 3). Head with clypeal line either distinct or indistinct, almost impunctate, without microsculptures. Both mandibles almost of same size in both sexes. Third segment of antenna about 0.6 times as long as 2nd (Fig. 30). Pronotum almost as wide as elytra, almost impunctate, without microsculptures. Elytra widest at basal 2/5, punctate sparsely and minutely, without microsculptures; sutural stria absent. Hind wings absent. Tarsal formula 5-5-4 in male, 4-4-4 in female. Aedeagus (Figs 41-42, 56) varying among specimens; aedeagus of specimens collected from Honshu slenderer than those from Kyushu (Figs 41-42). Spermatheca as shown in Fig. 68.

Body length 2.1-2.5 mm.

Distribution. Japan (Kyushu and Honshu).

Specimens examined. 1♂, Mt. Tara, Saga Pref., Kyushu, 15-IV-1984, S. Nomura leg.; 1♂, Chichigatani, Miyagawa-mura, Mie Pref., Honshu, 7-VIII-1988, N. Narukawa leg.; 1♂, Mt. Minamimatayama, Mie Pref., Honshu, 6-V-1995, N. Narukawa leg.; 1♂, 1♀, Mt. Minamimatayama, Mie Pref., Honshu, 19-XI-1995, K.



Figs 22-25: *Agathidium (Neoceble) omogoense yamaokai* subsp. nov. 22: female left mandible, lateral view; 23-25: male left mandibles, lateral view. Figs 26-28: *A. (N.) aeneum* Angelini and De Marzo. 26-27: male left mandibles, dorsal view; 28: male right mandible, dorsal view. Scale: 0.5 mm.

Kannou leg.; 1♀, Mt. Minamimatayama, Mie Pref., Honshu, 12-X-1997, K. Kannou leg.

Remarks. This species is similar to *Agathidium (Neoceble) omogoense* Angelini and De Marzo, 1990 in appearance but is distinguished by having antennae with the third segment shorter than the second. In contrast, *A. (N.) omogoense* has antennae with the third segment about 1.1 times as long as the second.

As mentioned in the redescription, the aedeagus exhibited different shapes between specimens collected from Kyushu and Honshu (Figs 41-42). Such difference seems to be enough to separate the Kyushu and Honshu populations at the sub-

species level, but the former is left unnamed here until further specimens become available for a more detailed comparison.

***Agathidium (Neocele) naturale* sp. nov.**

(Japanese name: Nachuraru-maru-tamakinokomushi)

(Figs 5-6, 31, 43, 57, 69, 77)

Male and female. Coloration. Dorsum shiny, almost concolorous, brown or dark brown in general; pronotum with reddish brown margins; mesosternum and venter light brown to brown; metasternum brown; legs brown; antennae bicolorous or tricolorous with 1st segment reddish brown, 2nd-8th light brown, 9th-10th dark brown, and 11th light brown or basal half dark brown and apical half light brown to brown.

Morphology. Body about 1.6 times as long as wide (Fig. 5), convex in general (Fig. 6).

Head widest at eyes, about 1.5 times as wide as long, almost impunctate, without microsculptures; length and width of head about 0.69 times as long and about 0.64 times as wide as those of pronotum, respectively (Fig. 5); anterior margin of head feebly curved; eyes slender, located at about apical 2/5 of head; clypeal line absent.

Both mandibles hairy, almost straight along internal margin, arcuate along external margin, strongly pointed at apex; left mandible almost as large as or slightly larger than right in both sexes.

Antennae elongate, about 0.87 times as long as width of head; 1st-6th and 11th segments longer than wide; the other segments wider than long (Fig. 31); 3rd segment almost as long as 2nd, and shorter than 4th plus 5th; length and width of 9th segment about 2.0 times as long and about 1.7 times as wide as those of 8th, respectively, and slightly longer than 10th; 11th segment slender; all segments hairy, 1st-8th segments sparsely and 9th-11th densely.

Pronotum widest at about basal 2/5, about 1.7 times as wide as long, almost impunctate, not microsculptured, distinctly angulate at anterior and posterior corners in lateral view (Fig. 6); length and width of pronotum about 0.62 times as long and almost as wide as those of elytra, respectively (Fig. 5).

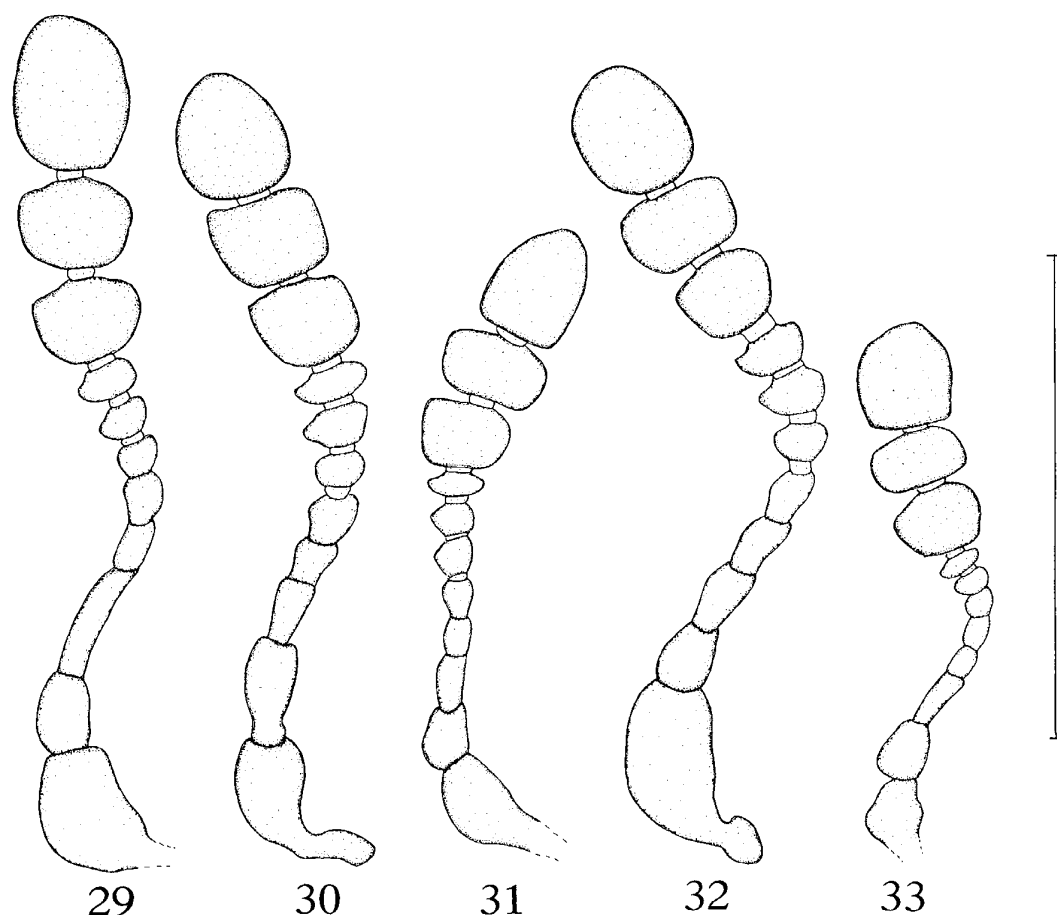
Elytra widest at about basal 2/5, almost as long as wide (Fig. 5), almost impunctate, not microsculptured, with a distinct humeral angle in lateral view (Fig. 6); sutural stria absent.

Mesosternum glabrous, impunctate, microsculptured; metasternum sparsely hairy, impunctate, microsculptured; venter hairy, impunctate, microsculptured.

All femora slender, not exhibiting differences between males and females; all tarsi densely hairy, tarsal formula 5-5-4 in male, 4-4-4 in female.

Hind wings absent.

Male. Aedeagus (Figs 43, 57) slender in general; median lobe curved, sharply bent about 1/6 of way from apex in lateral view, feebly sinuate laterally, sharply becoming thinner from about 1/9 of way from apex, with a longitudinal carina in ventral view; parameres slender in general, shorter than median lobe, curved in an arc, round at apex in lateral view, weakly sinuate laterally, but sharply curved inward near apex in ventral view.



Figs 29-33: antenna. 29: *Agathidium (Neoceble) derispioides* Nakane; 30: *A. (N.) piceolum* Hlisenikovský; 31: *A. (N.) naturale* sp. nov.; 32: *A. (N.) omogoense yamaokai* subsp. nov.; 33: *A. (N.) kyotoense* Angelini and De Marzo. Scale: 0.5 mm.

Female. Spermatheca as shown in Fig. 69.

Body length 1.7-1.9 mm (holotype, 1.8 mm).

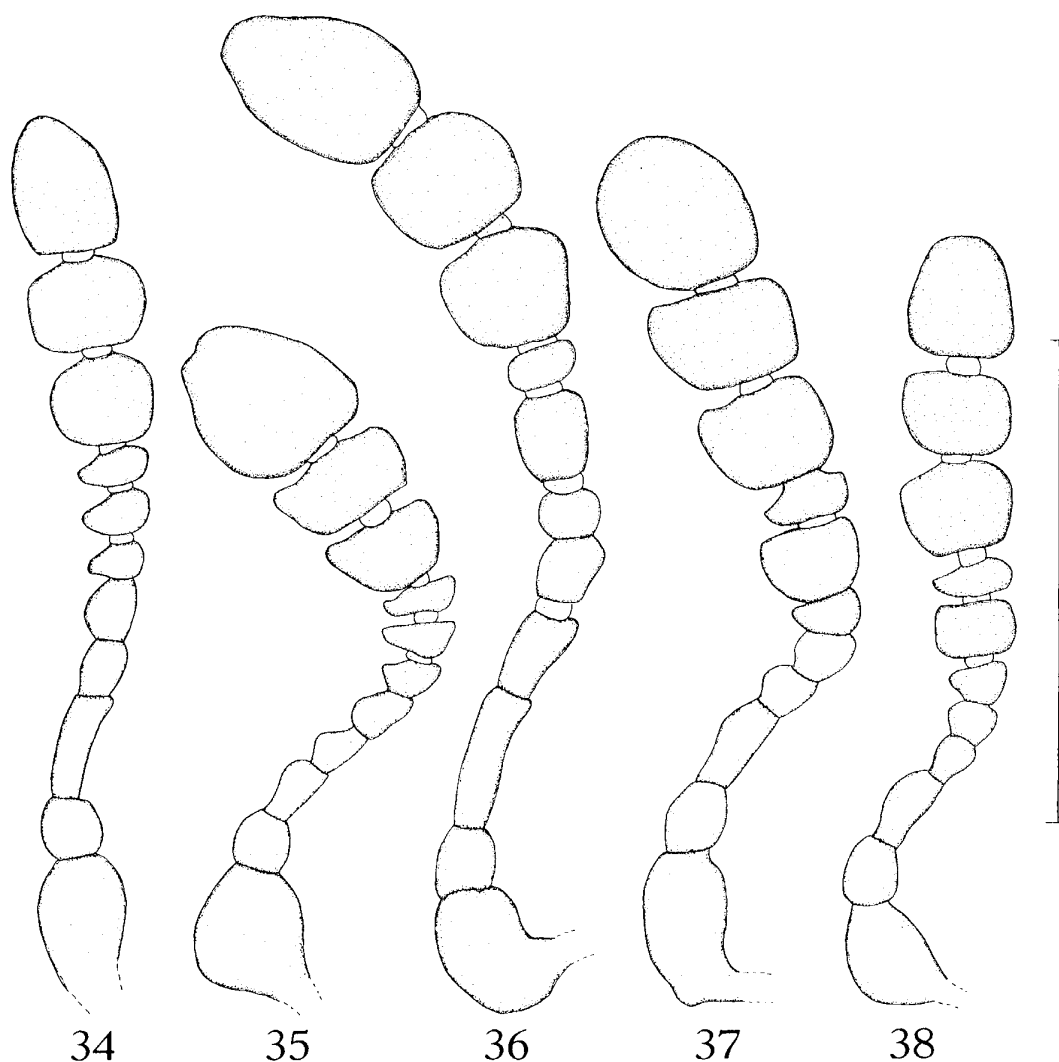
Distribution. Japan: Kyushu (Oita, Miyazaki and Kagoshima Prefectures).

Type series. Holotype: ♂, Mt. Kurodake, Oita Pref., Kyushu, 19-VI-1996, H. Hoshina leg. (Type No. 3094, Kyushu University). Paratypes: 1♂, same data as holotype; 2♀♀, Mt. Kurodake, Oita Pref., Kyushu, 24-VII-1996, H. Hoshina leg.; 1♂, Mt. Shiratori, Miyazaki Pref., Kyushu, 5-IV-1987, S. Nomura leg.; 1♀, Mt. Karakunida, Kagoshima Pref., Kyushu, 20-VI-1993, S. Onoda leg.

Specimens of related species examined. *Agathidium (Neoceble) funereum* Angelini and De Marzo, 1990: holotype, male, Yaseyuen, Kyoto Pref., Honshu, 4-VIII-1980, C. Besuchet leg. (preserved in Muséum d'histoire naturelle, Genève).

Remarks. This species is similar to *Agathidium (Neoceble) funereum* in appearance, but is distinguished by having the body smaller than 2.0 mm in length and the aedeagus that is relatively slender in ventral view (Fig. 57); in contrast, *A. (N.) funereum* has the large body, about 2.3-2.6 mm in length, and the aedeagus that is relatively thick in ventral view (Fig. 58).

The specimens from Mt. Kurodake were collected from the litter layer of the



Figs 34-38: antenna. 34: *Agathidium (Neocele) multitodum* sp. nov.; 35: *A. (N.) aeneum* Angelini and De Marzo; 36: *A. (N.) longicorne* Portevin; 37: *A. (N.) cribratum* Portevin; 38: *A. (N.) dubium* Portevin. Scale: 0.5 mm.

deciduous forest by Berlese funnel.

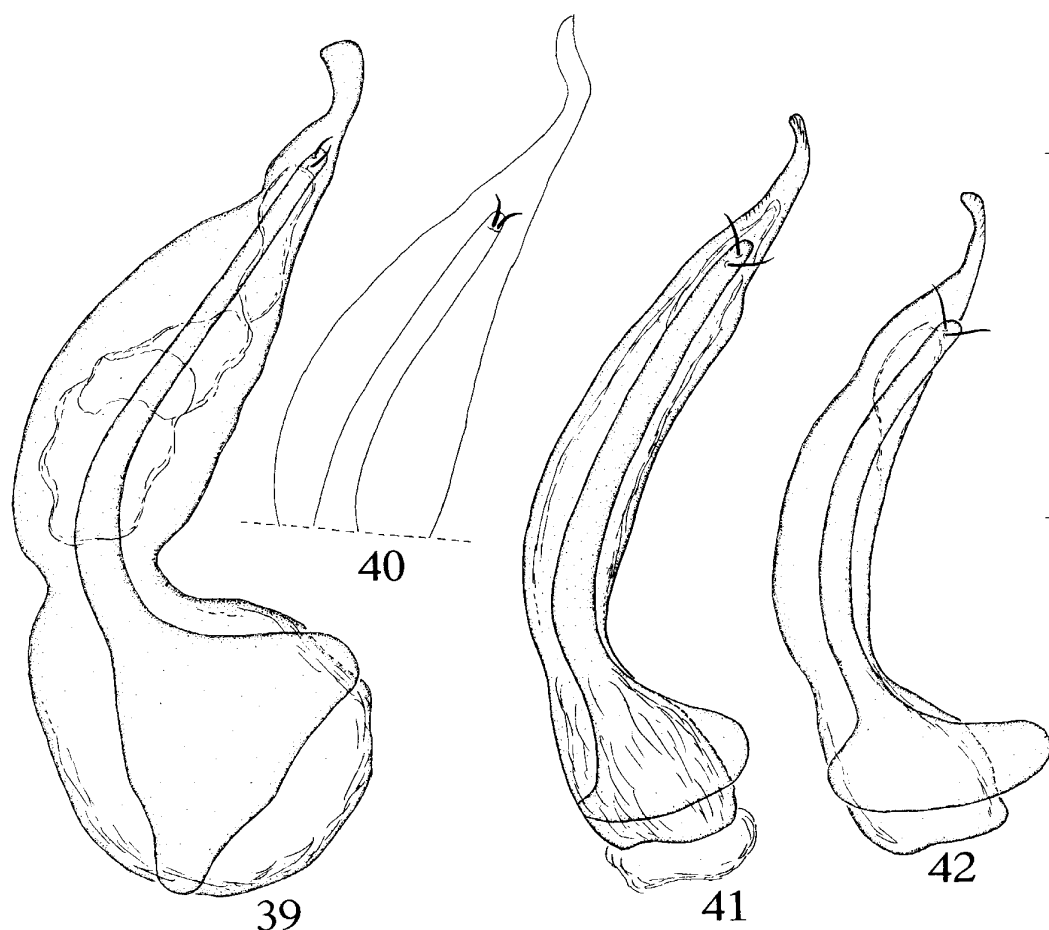
***Agathidium (Neocele) omogoense yamaokai* subsp. nov.**

(Japanese name: Yamaoka-omogo-maru-tamakinokomushi)

(Figs 7-8, 22-25, 32, 44, 59, 70, 77)

Coloration. Dorsum almost concolorous, reddish brown to brown; pronotum with reddish brown margins; 1st segment of antenna reddish brown; 2nd-8th segments and apical 1/3 of 11th segment light brown; 9th-10th segments and basal 2/3 of 11th segment brown, sometimes 10th segment dark brown.

Morphology. Body almost glabrous, convex in general (Fig. 8), about 1.6 times as long as wide (Fig. 7). Head without clypeal line, almost impunctate, without mi-



Figs 39, 41-42: aedeagus, lateral view. Fig. 40: apex of aedeagus, lateral view. 39: *Agathidium* (*Neocele*) *derispioides* Nakane from Shizuoka Pref., Honshu; 40: *A. (N.) derispioides* from Saga Pref., Kyushu; 41: *A. (N.) piceolum* Hlisenkovský from Mie Pref., Honshu; 42: *A. (N.) piceolum* from Saga Pref., Kyushu. Scale: 0.5 mm.

crosculptures. In female both mandibles of almost same size; male left mandible varying among specimens (Figs 23-25), clearly larger than right one and with tip erected as a horn (Figs 24-25) or almost the same size as right. Third segment of antenna about 1.1 times as long as 2nd (Fig. 32). Pronotum almost as wide as elytra, almost impunctate, without microsculptures. Elytra widest at basal 1/4, almost impunctate, without microsculptures; sutural stria very short, shallow, either distinct or indistinct. Hind wings absent. Tarsal formula 5-5-4 in male, 4-4-4 in female. Aedeagus as shown in Figs 44 and 59. Spermatheca as shown in Fig. 70.

Body length 2.2-2.6 mm (holotype, 2.5 mm).

Distribution. Japan: Kyushu.

Type series. Holotype: ♂, Mt. Seira, Saga Pref., Kyushu, 28-V-1984, S. Nomura leg. (Type No. 3095, Kyushu University). Paratypes, 1♂, Mt. Iwaya, Nagasaki Pref., Kyushu, 29-V-1987, S. Nomura leg.; 2♂♂, 2♀♀, Ryutousen Fall, Higashisonogi-cho, Nagasaki Pref., Kyushu, 5-VII-1996, S. Nomura leg.; 1♂, Mt. Kunimi, Nagasaki Pref., Kyushu, 7-X-1997, S. Nomura leg.; 1♂, Mt. Hattendake, Nagasaki Pref., Kyushu, 16-V-1997, S. Nomura leg.; 2♂♂, 2♀♀, Ike, Nishitaku, Taku-shi, Saga Pref.,

Kyushu, 18-V-1997, S. Nomura leg.

Specimens of related subspecies examined. *Agathidium (Neoceble) omogoense omogoense* Angelini and De Marzo, 1990: 1♂, Mt. Tsurugi, Tokushima Pref., Shikoku, 12-VIII-1998, H. Hoshina leg.; 1♂, 1♀, Omogo Valley, Ehime Pref., Shikoku, 12-VII-1996, H. Hoshina leg.; 3♂♂, 3♀♀, Omogo Valley, Ehime Pref., Shikoku, 10-VI-1997, H. Hoshina leg.

Remarks. The aedeagus, which is one of the most important characters for species identification, showed diagnostic differences between *Agathidium (Neoceble) omogoense* specimens collected from Kyushu and Shikoku, as follows: in the specimens collected from Kyushu, the median lobe of the aedeagus is weakly curved in lateral view and relatively slender near the apex in ventral view (Figs 44, 59), whereas in those from Shikoku, the median lobe of the aedeagus is sharply curved in lateral view and relatively thick near the apex in ventral view (Figs 45, 60). Based on these differences, the specimens collected from Kyushu are regarded as representatives of a new subspecies.

Etymology. This new subspecies is dedicated to an amateur entomologist, Mr. Yukio Yamaoka, from whom I received suggestions and information many times.

***Agathidium (Neoceble) kyotoense* Angelini and De Marzo, 1990**
(Japanese name: Kyoto-maru-tamakinokomushi)
(Figs 9-10, 33, 46, 61, 71, 77)

Agathidium (Neoceble) kyotoense Angelini and De Marzo, 1990: 79 (Japan: Honshu); Angelini 1995: 136; Angelini and De Marzo 1998a: 126.

Coloration. Dorsum almost concolorous, brown or dark brown; pronotum with light brown or reddish brown margins; 1st segment of antenna reddish brown; 2nd-8th segments light brown; 9th-11th segments brown, or sometimes apical half of 11th segment light brown.

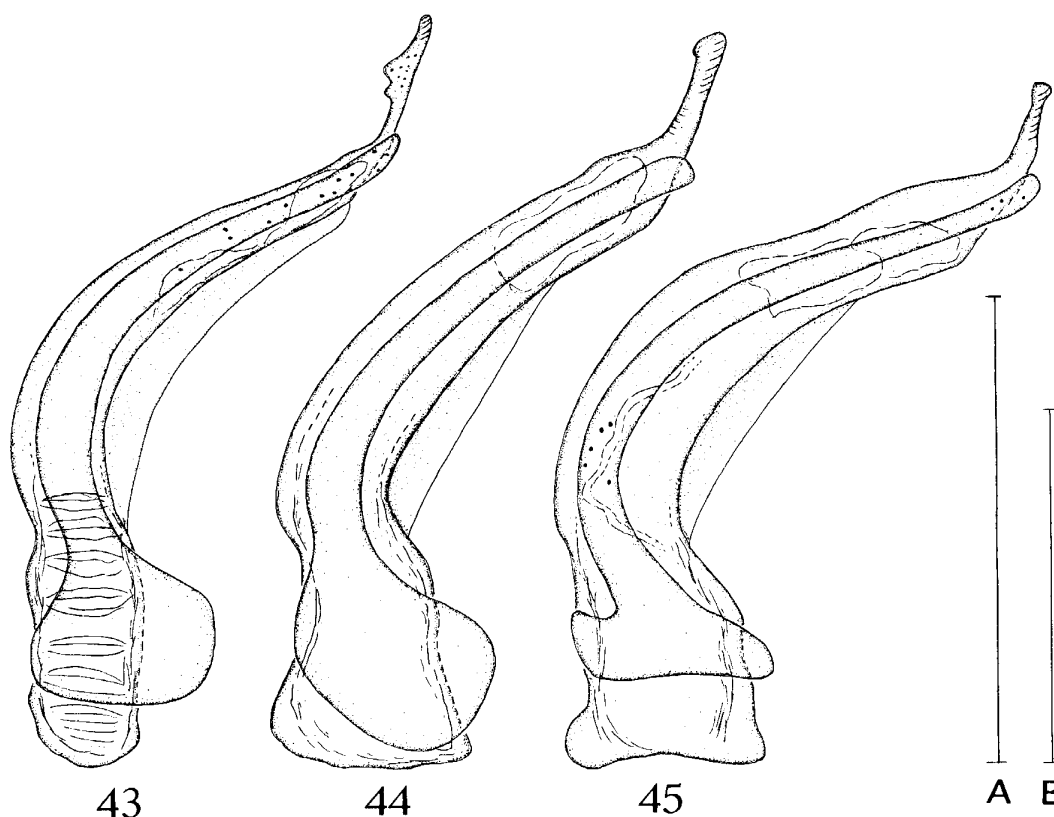
Morphology. Body almost glabrous, convex in general (Fig. 10), about 1.6 times as long as wide (Fig. 9). Head with distinct or indistinct clypeal line, punctate sparsely and minutely or almost impunctate, without microsculptures. Both mandibles of almost same size in both sexes. Third segment of antenna almost as long as 2nd (Fig. 33). Pronotum narrower than elytra, punctate sparsely and minutely or almost impunctate, without microsculptures. Elytra widest at basal 2/5, punctate sparsely and minutely or almost impunctate, without microsculptures; sutural stria shallow, present in apical 2/5 of elytra. Hind wings normal. Tarsal formula 4-4-4 in both sexes. Aedeagus as shown in Figs 46 and 61. Spermatheca as shown in Fig. 71.

Body length 1.5-1.8 mm.

Distribution. Japan (Kyushu, Shikoku and Honshu) and Taiwan.

Specimens examined. 1♀, Mt. Shiraiwa, Miyazaki Pref., Kyushu, 26-28-VII-1996, T. Ueno and H. Goto leg.; 1♂, 1♀, Mt. Ishizuchi, Ehime Pref., Shikoku, 18-25-VIII-1980, S. and J. Peck leg.; 1♀, Omogo Valley, Ehime Pref., Shikoku, 5-VIII-1998, H. Hoshina leg.; 1♂, Mt. Inamura, Nara Pref., Honshu, 23-VII-1994, T. Ito leg.; 1♂, Dôdaira, Tanzawa, Kanagawa Pref., Honshu, 16-IX-1993, Y. Hirano leg.

Remarks. This species was collected for the first time from Kyushu and



Figs 43-45: aedeagus, lateral view. 43: *Agathidium (Neoceble) naturale* sp. nov.; 44: *A. (N.) omogoense yamaokai* subsp. nov.; 45: *A. (N.) omogoense omogoense* Angelini and De Marzo. Scale A: 0.5 mm for Fig. 43. Scale B: 0.5 mm for Figs 44-45.

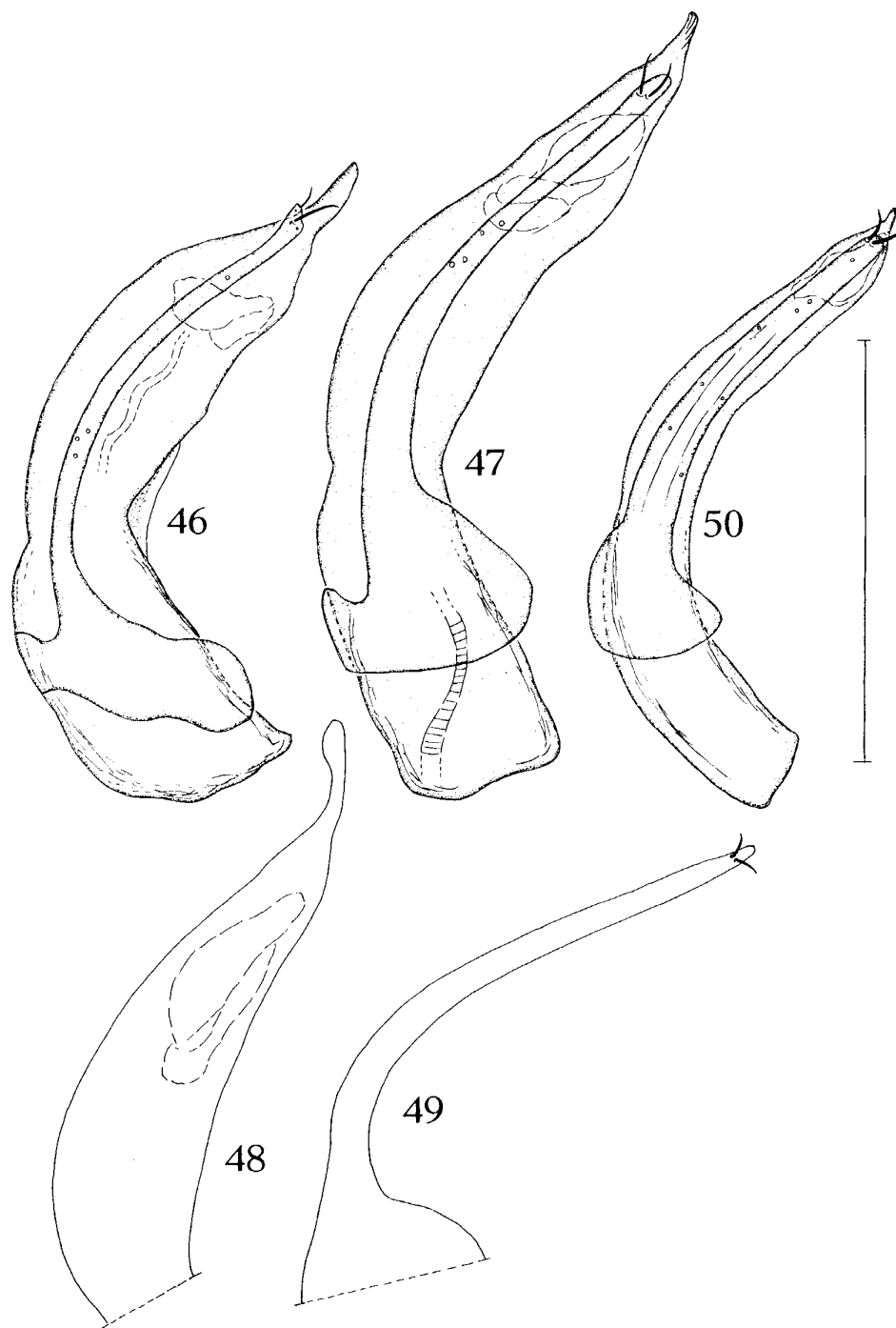
Shikoku, being previously known only from Honshu. It has two remarkable features: its body length is the shortest of all species of Japanese *Neoceble*, and the tarsal formula is 4-4-4 in both sexes.

***Agathidium (Neoceble) multitodum* sp. nov.**
(Japanese name: Maruchi-maru-tamakinokomushi)
(Figs 11-13, 34, 47, 62, 72, 78)

Male and female. Coloration. Dorsum shiny, almost concolorous, brown or dark brown in general; head of 1 female with a reddish brown patch on vertex; pronotum with reddish brown margins; mesosternum and venter light brown to brown; metasternum brown; legs brown; antennae tricolorous, 1st segment reddish brown, 9th-10th segments and basal 3/5 of 11th segment dark brown, other segments light brown.

Morphology. Body about 1.7 times as long as wide (Fig. 11), convex in general (Fig. 12).

Head widest at eyes, about 1.4 times as wide as long, punctate minutely, without microsculptures; length and width of head almost as long and about 0.67 times as wide as those of pronotum, respectively (Fig. 11); anterior margin of head feebly



Figs 46-47, 50: aedeagus, lateral view. Fig. 48: apex of aedeagus, lateral view. Fig. 49: paramere, lateral view. 46: *Agathidium (Neocele) kyotoense* Angelini and De Marzo; 47: *A. (N.) multitodum* sp. nov.; 48-49: *A. (N.) akemiae* Fujimori; 50: *A. (N.) aeneum* Angelini and De Marzo. Scale: 0.5 mm.

expanded anteriorly at sides; eyes oval, located at about of way from apex of head $1/3$; clypeal line indistinct.

Both mandibles hairy, almost straight along internal margin, arcuate along

external margin, strongly pointed at apex, almost of the same size in female, whereas in male, left mandible of holotype similar in shape to right, but about 1.2 times as long and wide as right, and left mandible of paratype with a remarkable horn-like projection on external margin near base (Fig. 13).

Antennae elongate, about 1.2 times as long as width of head; 1st-5th and 11th segments longer than wide; 9th segment almost as long as wide; the other segments wider than long (Fig. 34); 3rd segment about 1.8 times as long as 2nd, and shorter than 4th plus 5th; length and width of 9th segment about 2.4 times as long and about 1.2 times as wide as those of 8th, respectively, and almost as large as those of 10th; 11th segment slender; all segments hairy, 1st-8th segments sparsely and 9th-11th segments densely.

Pronotum widest at about middle, about 2.0 times as wide as long, not microsculptured, distinctly angulate at anterior and posterior corners in lateral view (Fig. 12); length and width of pronotum about 0.48 times as long and about 0.94 times as wide as those of elytra, respectively, (Fig. 11); punctures of pronotum spaced about 2-10 times as far apart as their own diameter.

Elytra widest at about basal 2/9, almost as long as wide (Fig. 11), not microsculptured, with distinct humeral angle in lateral view (Fig. 12); sutural stria distinct and present at about apical 2/7; punctures of elytra spaced about 2-10 times as far apart as their own diameter.

Mesosternum glabrous, impunctate, microsculptured; metasternum hairy, impunctate, microsculptured; venter hairy, impunctate, microsculptured.

All femora slender, not exhibiting differences between males and females; all tarsi densely hairy, tarsal formula 5-5-4 in male, 5-4-4 in female.

Hind wings normal.

Male. Aedeagus (Figs 47, 62) thick in general; median lobe weakly curved, simply becoming thinner from middle toward apex, pointed apically in lateral view, with almost parallel sides, almost straight apically in ventral view; parameres slender in general, a little shorter than median lobe, curved in an arc, round at apex in lateral view, almost straight at sides, but feebly curved inward near apex in ventral view.

Female. Spermatheca as shown in Fig. 72.

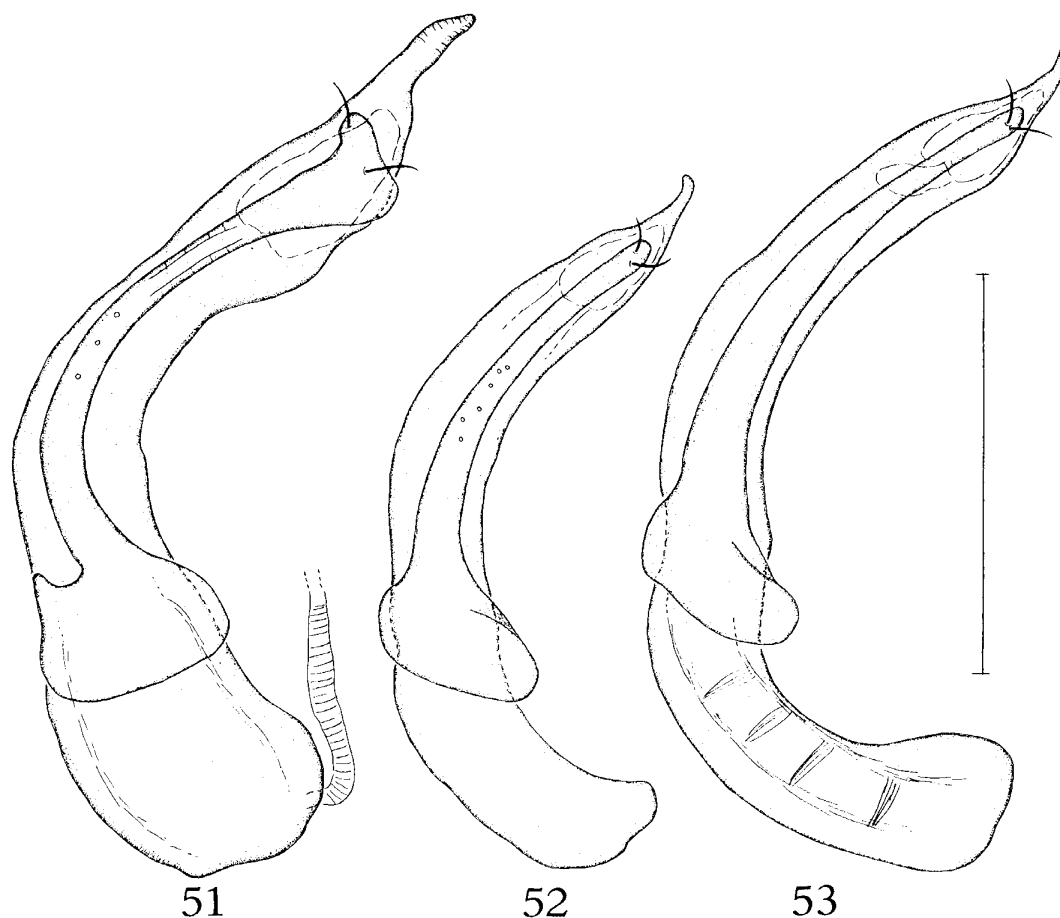
Body length 2.6-3.2 mm (holotype, 3.0 mm).

Distribution. Japan: Kyushu (Oita Pref.) and Honshu (Mie Pref.).

Type series. Holotype: ♂, Mt. Kurodake, Oita Pref., Kyushu, 19-VI-1996, H. Hoshina leg. (Type No. 3096, Kyushu University). Paratypes, 1 ♀, same data as holotype; 1 ♀, Mt. Kurodake, Oita Pref., Kyushu, 9-VI-1999, H. Hoshina leg.; 1 ♂, Hirakura-enshûrin, Misugi-mura, Mie Pref., Honshu, 8-VI-1997, Y. Hirano leg. (Preserved in private collections of Y. Hirano).

Specimens of related species examined. *Agathidium* (*Neoceble*) *dubium* Portevin, 1908: see the list of specimens examined of this species later in this paper; *A. (N.) akemiae* Fujimori, 1998: holotype, ♂, Sakase, Omogo, Ehime Pref., Shikoku, 2-VII-1978, A. Oda leg. (preserved in Ehime University).

Remarks. This species is similar to *Agathidium* (*Neoceble*) *dubium* in appearance, but is distinguished by a relatively large head (about 0.67 times as wide as pronotum) (Fig. 11), in comparison with *A. (N.) dubium*, which has a relatively small head (about 0.53 times as wide as pronotum) (Fig. 20). This new species is also similar to *A. (N.) akemiae*, but the punctures on the elytra are spaced about 2-

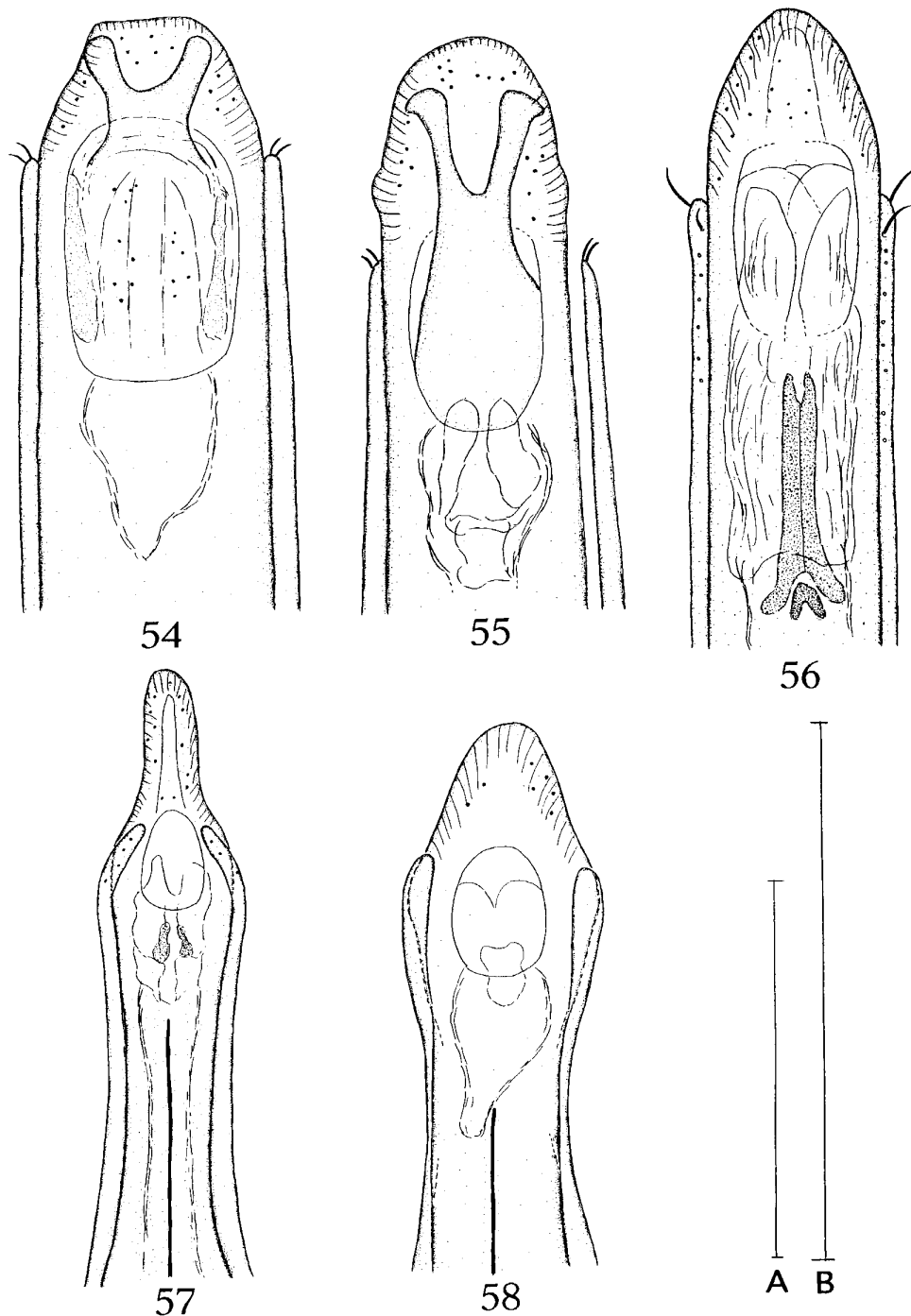


Figs 51-53: aedeagus, lateral view. 51: *Agathidium (Neocele) longicorne* Portevin; 52: *A. (N.) cribratum* Portevin; 53: *A. (N.) dubium* Portevin. Scale: 0.5 mm.

10 times as far apart as their own diameter, the median lobe of the aedeagus is pointed and almost straight apically (Fig. 47), and the parameres of the aedeagus are relatively weakly curved along their inner margins in lateral view (Fig. 47); in contrast, *A. (N.) akemiae* has sparse and minute punctures on the elytra, the median lobe of its aedeagus is pointed and bent apically (Fig. 48), and the parameres of the aedeagus are sharply curved along their inner margins in lateral view (Fig. 49).

The specimens from Mt. Kurodake were collected in the deciduous forest by beating.

Etymology. The specific epithet is derived from the multitudinous punctures on the pronotum and elytra.



Figs 54-58: apex of aedeagus, ventral view. 54: *Agathidium* (*Neocele*) *derispioides* Nakane from Shizuoka Pref., Honshu; 55: *A. (N.) derispioides* from Saga Pref., Kyushu; 56: *A. (N.) piceolum* Hlisenkovský from Mie Pref., Honshu; 57: *A. (N.) naturale* sp. nov; 58: *A. (N.) funereum* Angelini and De Marzo. Scale A: 0.5 mm for Figs 54-55. Scale B: 0.5 mm for Figs 56-58.

Agathidium (Neoceble) aeneum Angelini and De Marzo, 1990

(Japanese name: Takane-maru-tamakinokomushi)

(Figs 14-15, 26-28, 35, 50, 63, 73, 78)

Agathidium (Neoceble) aeneum Angelini and De Marzo, 1990: 86 (Japan: Shikoku); Angelini 1995: 126.

Coloration. Dorsum almost concolorous, light brown to reddish brown; pronotum with light brown or reddish brown margins; elytra sometimes slightly darker than head and pronotum; 1st segment of antenna reddish brown; 2nd-8th segments and apical 3/5 of 11th segment light brown; 9th-10th segments and basal 2/5 of 11th segment brown.

Morphology. Body almost glabrous, convex in general (Fig. 15), about 1.7 times as long as wide (Fig. 14). Head with a shallow clypeal line, almost impunctate, without microsculptures. Both mandibles in female of almost same size; male left mandible varying among specimens, clearly larger than right and sharply curved inward or nearly the same size as right (Figs 26-28). Third segment of antenna about 1.2 times as long as 2nd (Fig. 35). Pronotum narrower than elytra, sparsely and minutely punctate, without microsculptures. Elytra widest at basal 2/5, without microsculptures; punctures of elytra spaced about 2-12 times as far apart as their own diameter; sutural stria distinct; length of sutural stria varying among specimens, from 1/5 to 1/3 of length of elytra. Hind wings normal. Tarsal formula 5-5-4 in male, 4-4-4 in female. Aedeagus as shown in Figs 50 and 63. Spermatheca as shown in Fig. 73.

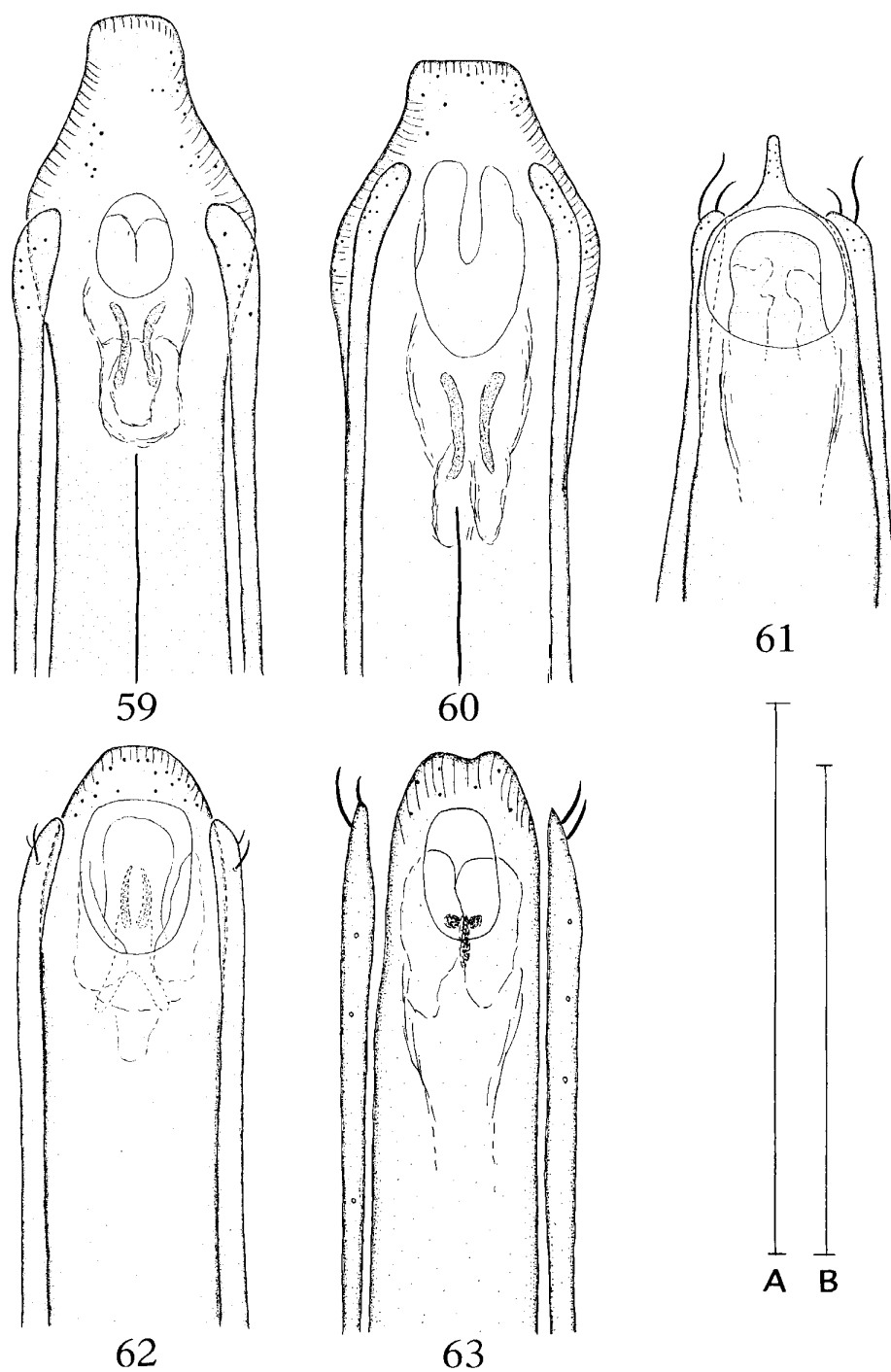
Body length 2.3-2.6 mm.

Distribution. Japan (Kyushu, Shikoku and Honshu).

Specimens examined. 1♂, Mt. Kurodake, Oita Pref., Kyushu, 29-VI-1995, H. Hoshina leg.; 1 specimen, Mt. Tachibana, Fukuoka Pref., Kyushu, 16-V-1995, H. Hoshina leg.; 2♀♀, Mt. Tachibana, Fukuoka Pref., Kyushu, 24-IV-1998, H. Hoshina leg.; 8 specimens, Mt. Tachibana, Fukuoka Pref., Kyushu, 30-IV-1998, H. Hoshina leg.; 1♂, Mt. Tsurugi, Tokushima Pref., Shikoku, 13-VIII-1995, H. Hoshina leg.; 1♂, Mt. Tsurugi, Tokushima Pref., Shikoku, 10-VII-1996, H. Hoshina leg.; 3♂♂, 1♀, Mt. Maruzasa, Tokushima Pref., Shikoku, 11-VII-1996, H. Hoshina leg.; 1 specimen, Mt. Nagusayama, Hyogo Pref., Honshu, 10-V-1997, H. Hoshina leg.; 1♂, Yamatodani forest road, Miyagawa-mura, Mie Pref., Honshu, 3-V-1994, H. Yokozeki leg.; 1♂, Mt. Minamimatayama, Mie Pref., Honshu, 11-IV-1996, A. Amagasu leg.

Remarks. This species was collected for the first time from Kyushu and Honshu, being previously known only from Shikoku. It is similar to *Agathidium (Neoceble) multitodum* sp. nov., but is distinguished by having antennae with the third segment about 1.2 times as long as the second (Fig. 35); in contrast, *A. (N.) multitodum* has the third segment about 1.8 times as long as the second (Fig. 34).

The specimens that I collected were caught in the evergreen forest by beating.



Figs 59-63: apex of aedeagus, ventral view. 59: *A. (N.) omogoense yamaokai* subsp. nov.; 60: *A. (N.) omogoense omogoense* Angelini and De Marzo; 61: *A. (N.) kyotoense* Angelini and De Marzo; 62: *A. (N.) multitodum* sp. nov.; 63: *A. (N.) aeneum* Angelini and De Marzo. Scale A: 0.5 mm for Figs 59-62. Scale B: 0.25 mm for Fig. 63.

Agathidium (Neoceble) longicorne Portevin, 1908
(Japanese name: Higenaga-maru-tamakinokomushi)
(Figs 16-17, 36, 51, 64, 74, 78)

Agathidium (Neoceble) longicorne Portevin 1908: 25 (Japan: Honshu); Jacobson 1910: 624; Portevin 1914: 229; 1927: 90; Hatch 1929: 78; Hisamatsu 1985: 237, pl. 42, fig. 31; Angelini 1986: 150; Angelini and De Marzo 1990: 83; Angelini 1995: 130; Hoshina 1998: 140.

Agathidium longicorne: Nakane 1963: 72, pl. 36, fig. 24.

Agathidium (Stigmoceble) longicorne: Hlisenkovský 1964: 120; Lafer 1989: 328.

Coloration. Dorsum almost concolorous, brown or black; head with red or reddish brown patch on vertex; pronotum with reddish brown margins; 1st, 8th, and apical 1/3 of 11th segment of antennae reddish brown; 2nd-6th segments light brown; 7th and 9th-10th segments, and basal 2/3 of 11th segment dark brown.

Morphology. Body almost glabrous, flat in general (Fig. 17), about 1.8 times as long as wide (Fig. 16). Head with indistinct or distinct clypeal line, without microsculptures; punctures of head spaced about 4-10 times as far apart as their own diameter. Both mandibles of almost same size in both sexes. Third segment of antenna about 1.9 times as long as 2nd (Fig. 36). Pronotum almost as wide as elytra, without microsculptures; punctures of pronotum as on head. Elytra widest at basal 1/5, without microsculptures; punctures of elytra spaced about 2-8 times as far apart as their own diameter; sutural stria distinct, its length varying among specimens, from 2/5 to half of length of elytra. Hind wings normal. Tarsal formula 5-5-4 in male, 5-4-4 in female. Aedeagus as shown in Figs 51 and 64. Spermatheca as shown in Fig. 74.

Body length 2.4-3.5 mm.

Distribution. Japan (Kyushu, Shikoku, Honshu and the Ryukyus (Tokunoshima Is.)).

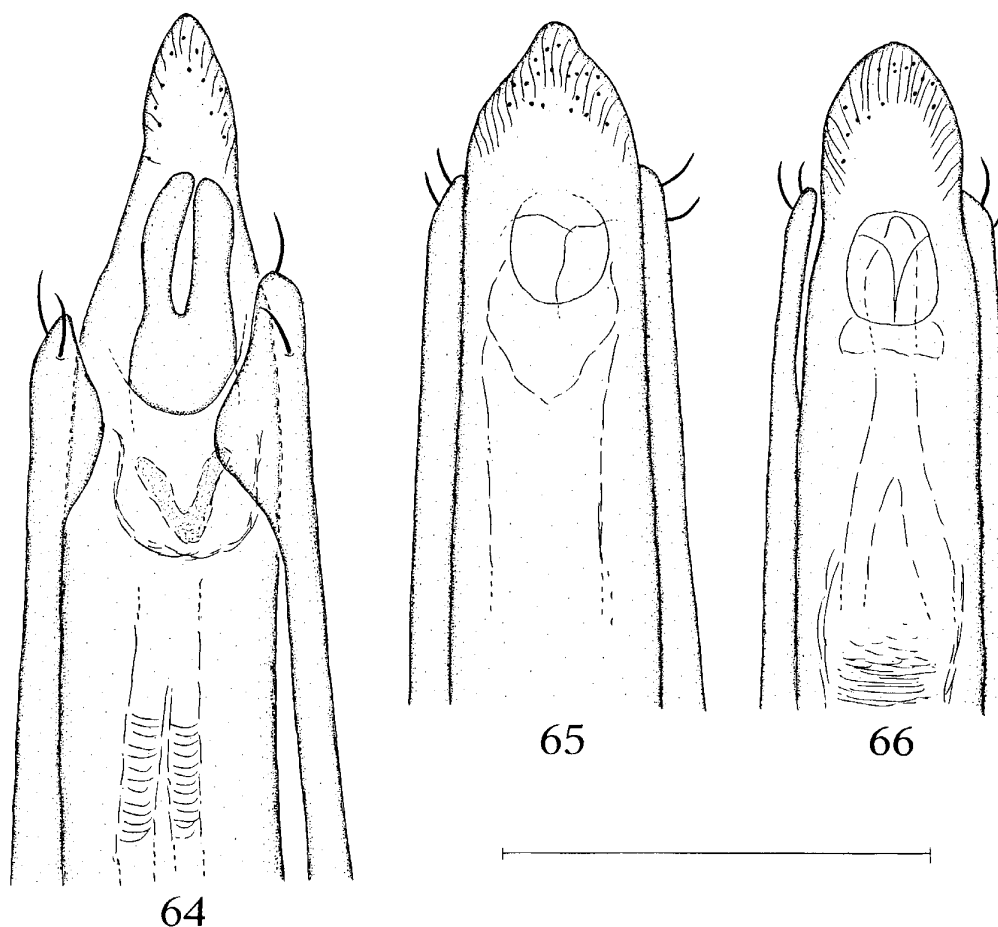
Specimens examined. 2♂♂, Mt. Shiratori, Miyazaki Pref., Kyushu, 5-VIII-1996, T. Ueno leg.; 1♂, 3♀♀, Mt. Kurodake, Oita Pref., Kyushu, 29-VI-1995, H. Hoshina leg.; 8 specimens, Mt. Kurodake, Oita Pref., Kyushu, 19-VI-1996, T. Ueno leg.; 1♂, Koyayama, Oda-cho, Ehime Pref., Shikoku, 2-VIII-1995, E. Yamamoto leg.; 1♂, Mt. Oikedake, Mie Pref., Honshu, 3-V-1989, N. Narukawa leg.

Remarks. This species was collected for the first time from Kyushu, being previously known from other parts of Japan. It is similar to *Agathidium (Neoceble) cribratum* Portevin, 1905 in appearance, but is distinguished by having antennae with the seventh segment longer than wide (Fig. 36); in contrast, *A. (N.) cribratum* has antennae with the seventh segment shorter than wide (Fig. 37).

The specimens from Mt. Kurodake were collected in the deciduous forest by beating.

Agathidium (Neoceble) cribratum Portevin, 1905
(Japanese name: Nokogiri-maru-tamakinokomushi)
(Figs 18-19, 37, 52, 65, 75, 78)

Agathidium cribratum Portevin, 1905: 419 (Japan: Honshu).



Figs 64-66: apex of aedeagus, ventral view. 64: *Agathidium (Neoceble) longicorne* Portevin; 65: *A. (N.) cribratum* Portevin; 66: *A. (N.) dubium* Portevin. Scale: 0.25 mm.

Agathidium (Neoceble) cribratum: Portevin 1914: 229; 1927: 90; Hatch, 1929: 78; Angelini 1986: 149; Angelini and De Marzo 1990: 87; Angelini 1995: 132; Hoshina 1998: 140.

Agathidium (Chaetoceble) cribratum: Jacobson 1910: 624.

Agathidium (Stigmoceble) cribratum: Hlisnikovský 1964: 123; Lafer 1989: 328.

Coloration. Dorsum almost concolorous, usually black, rarely brown; pronotum with reddish brown margins; 1st-6th segments of antenna light brown; 7th, 9th-10th segments, and basal 2/5 of 11th segment black; 8th segment dark brown; apical 3/5 of 11th segment brown.

Morphology. Body almost glabrous, a little convex in general (Fig. 19), about 1.6 times as long as wide (Fig. 18). Head with distinct clypeal line and either strong or weak microsculptures; punctures of head spaced about 4-8 times as far apart as their own diameter. Both mandibles of almost same size in both sexes. Third segment of antenna about 1.3 times as long as 2nd (Fig. 37). Pronotum narrower than elytra, with either strong or weak microsculptures; punctures of pronotum minute, sparser than those of elytra and head. Elytra widest at basal 1/3, without microsculptures; punctures of elytra spaced about 2-5 times as far apart as their

own diameter; sutural stria distinct, present in apical 2/5 of elytra. Hind wings normal. Tarsal formula 5-5-4 in male, 5-4-4 in female. Aedeagus as shown in Figs 52 and 65. Spermatheca as shown in Fig. 75.

Body length 2.4-3.4 mm.

Distribution. Japan (Kyushu, Shikoku, Honshu and the Ryukyus (Amami-Oshima Is.)).

Specimens examined. 2♀♀, Mt. Kurodake, Oita Pref., Kyushu, 9-VI-1999, H. Hoshina leg.; 1♂, Mt. Hikosan, Fukuoka Pref., Kyushu, 14-V-1969, M. T. Chûjô leg.; 1♂, Mt. Tachibana, Fukuoka Pref., Kyushu, 23-X-1983, S. Nomura leg.; 1♂, Mt. Fukuchi, Fukuoka Pref., Kyushu, 8-IV-1997, H. Hoshina leg.; 1♂, Mt. Takanawa, Ehime Pref., Shikoku, 16-VIII-1995, H. Hoshina leg.; 1♂, Shirataki, Nagahama-cho, Ehime Pref., Shikoku, 15-VI-1997, H. Hoshina leg.; 6 specimens, Mt. Minami-matayama, Mie Pref., Honshu, 11-IV-1996, A. Amagasu leg.; 1♂, 2♀♀, Mt. Nonobori, Mie Pref., Honshu, 20-IV-1997, F. Ichikawa leg.; 1♂, Dôdaira, Tanzawa, Kanagawa Pref., Honshu, 11-VI-1993, Y. Hirano leg.

Remarks. This species was collected for the first time from Kyushu and Shikoku, being previously known from Honshu and Amami-Oshima Is. It is similar to *Agathidium (Neoceble) dubium* in appearance, but is distinguished by having elytra that relatively weakly become narrower from the basal 1/3 toward the apex (Fig. 18) and an aedeagus with a small apical protuberance in ventral view (Fig. 65); in contrast, the elytra of *A. (N.) dubium* sharply become narrower from the basal 1/4 toward the apex (Fig. 20) and the aedeagus has a simple round apex in ventral view (Fig. 66).

The specimens from Mts. Kurodake, Fukuchi, and Takanawa were collected in the deciduous forest by beating.

***Agathidium (Neoceble) dubium* Portevin, 1908**

(Japanese name: Nisenokogiri-maru-tamakinokomushi)

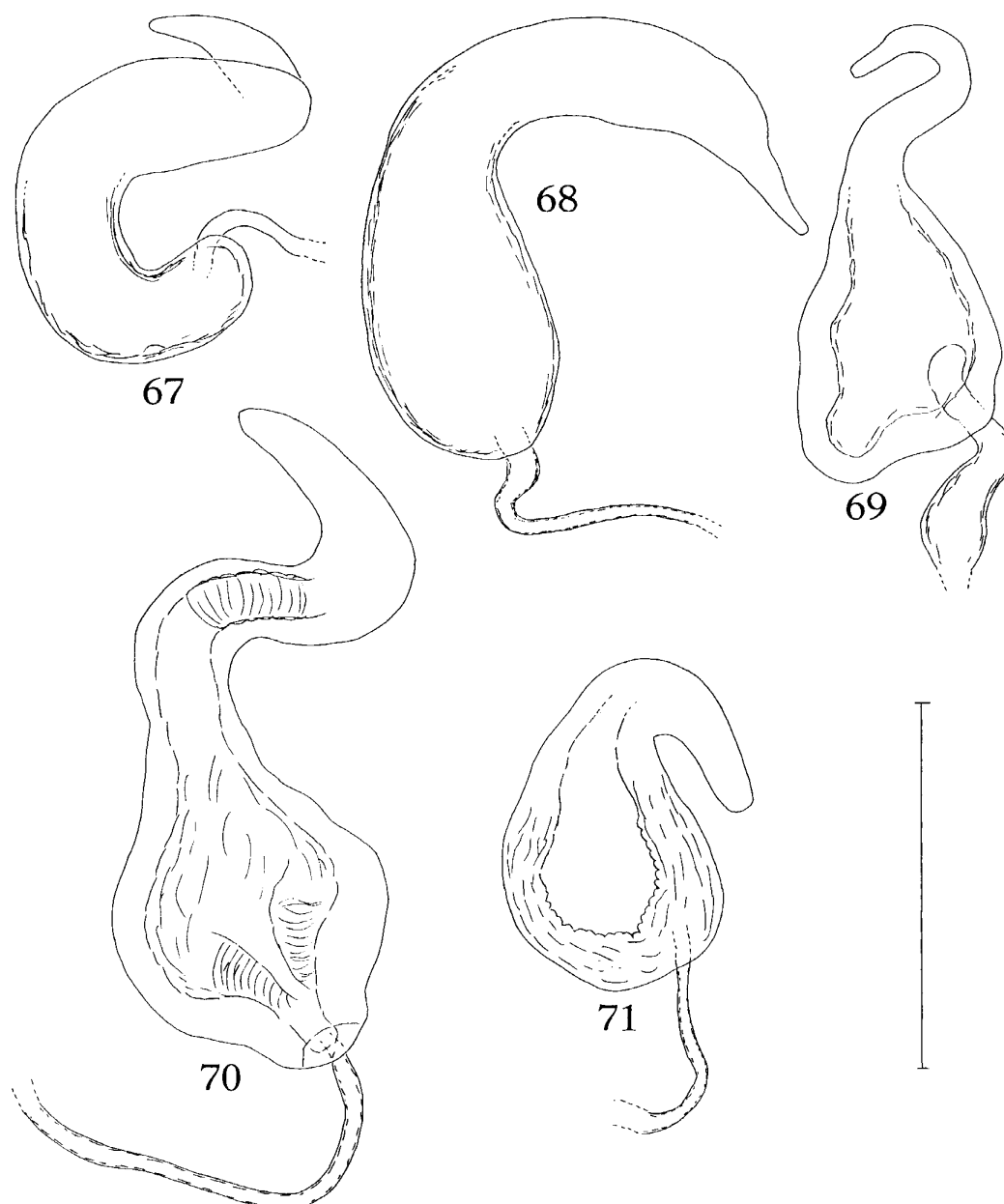
(Figs 20-21, 38, 53, 66, 76, 78)

Agathidium (Neoceble) dubium Portevin, 1908: 23 (Japan: Honshu); Jacobson 1910: 624; Portevin 1914: 228; 1927: 90; Hatch 1929: 78; Hlisnikovský 1964: 59; Angelini and De Marzo 1990: 89; Angelini 1995: 125.

Anisotoma japonica Portevin, 1908: 21 (Japan: Honshu); Jacobson 1910: 622; Portevin 1914: 226; 1927: 81; Hatch 1929: 56; Wheeler 1979: 286; Angelini and De Marzo 1990: 64; Lafer 1989: 324. **syn. nov.**

Coloration. Dorsum almost concolorous, usually dark brown to black, rarely reddish brown; head sometimes with reddish brown patch on vertex; pronotum with light brown or reddish brown margins; 1st-6th segments of antenna light brown to reddish brown; 7th-8th segments and apical 3/5 of 11th segment brown; 9th-10th segments and basal 2/5 of 11th segment dark brown.

Morphology. Body almost glabrous, a little convex in general (Fig. 21), about 1.7 times as long as wide (Fig. 20). Head with distinct clypeal line and weak microsculptures; punctures of head spaced about 3-7 times as far apart as their own diameter. Both mandibles of almost same size in both sexes. Third segment of antenna about 1.3 times as long as 2nd (Fig. 38). Pronotum narrower than elytra, with

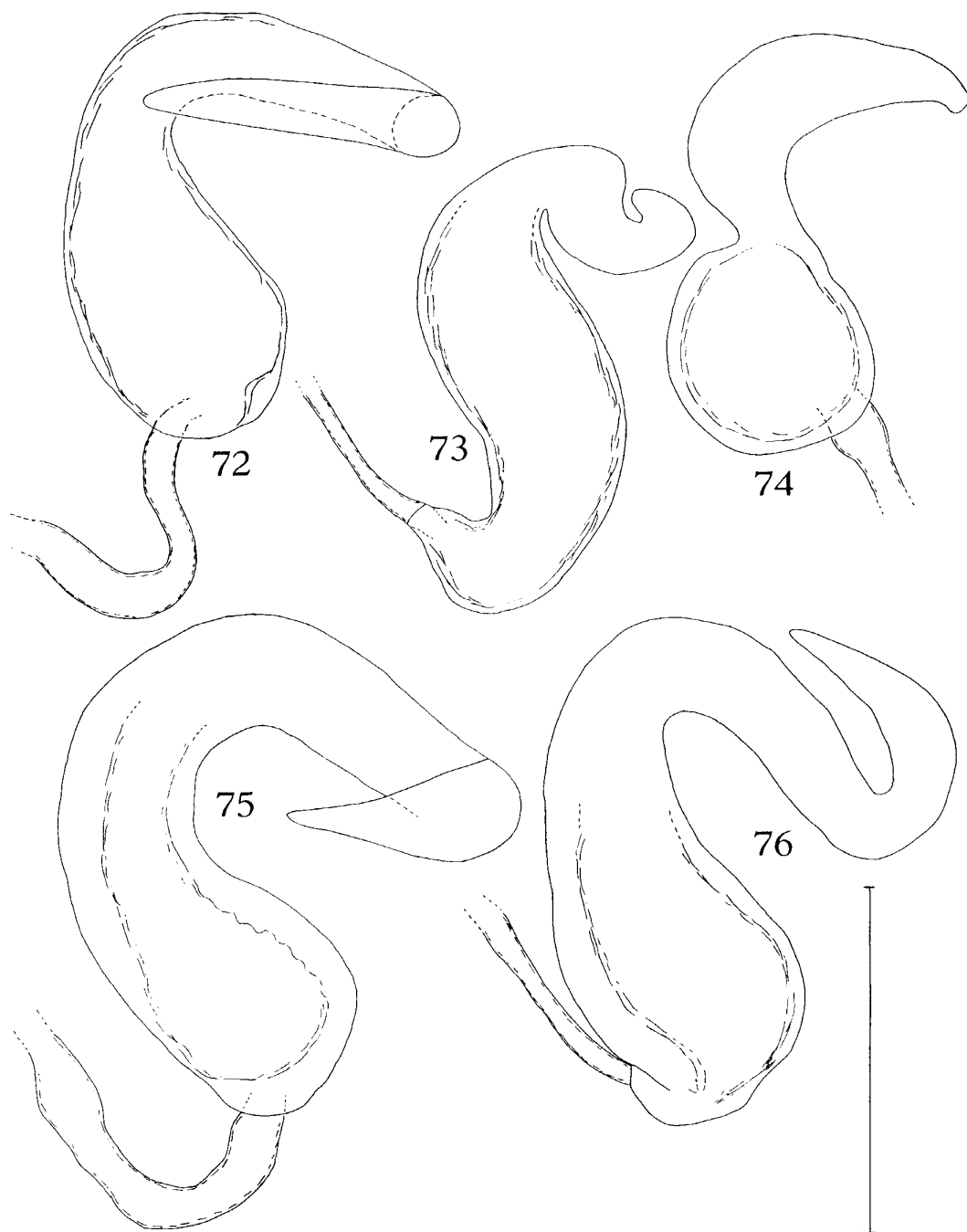


Figs 67-71: spermatheca. 67: *Agathidium* (*Neocele*) *derispioides* Nakane; 68: *A. (N.) piceolum* Hlisnikovský; 69: *A. (N.) naturale* sp. nov.; 70: *A. (N.) omogoense yamaokai* subsp. nov.; 71: *A. (N.) kyotoense* Angelini and De Marzo. Scale: 0.125 mm.

weak microsculptures; punctures of pronotum minute, sparser than those of elytra and head. Elytra widest at basal 1/4, without microsculptures; punctures of elytra spaced about 2-8 times as far apart as their own diameter; sutural stria distinct, present in apical 2/5 of elytra. Hind wings normal. Tarsal formula 5-5-4 in male, 5-4-4 in female. Aedeagus as shown in Figs 53 and 66. Spermatheca as shown in Fig. 76.

Body length 2.4-2.8 mm.

Distribution. Japan (Kyushu, Shikoku and Honshu).



Figs 72-76: spermatheca. 72: *Agathidium (Neocele) multitodum* sp. nov.; 73: *A. (N.) aeneum* Angelini and De Marzo; 74: *A. (N.) longicorne* Portevin; 75: *A. (N.) cribratum* Portevin; 76: *A. (N.) dubium* Portevin. Scale: 0.125 mm.

Specimens examined. Holotype of *Agathidium (Neocele) dubium*, ♂, “Environs de Tokio”, Honshu, J. Harmand leg. (preserved in Muséum National d’Histoire Naturelle, Paris); holotype of *Anisotoma japonica*, ♀, “Environs de Tokio”, Honshu, J. Harmand leg. (preserved in Muséum National d’Histoire Naturelle, Paris); 1♂, 1♀, Mt. Kurodake, Oita Pref., Kyushu, 19-VI-1996, H. Hoshina leg.; 2♀♀,

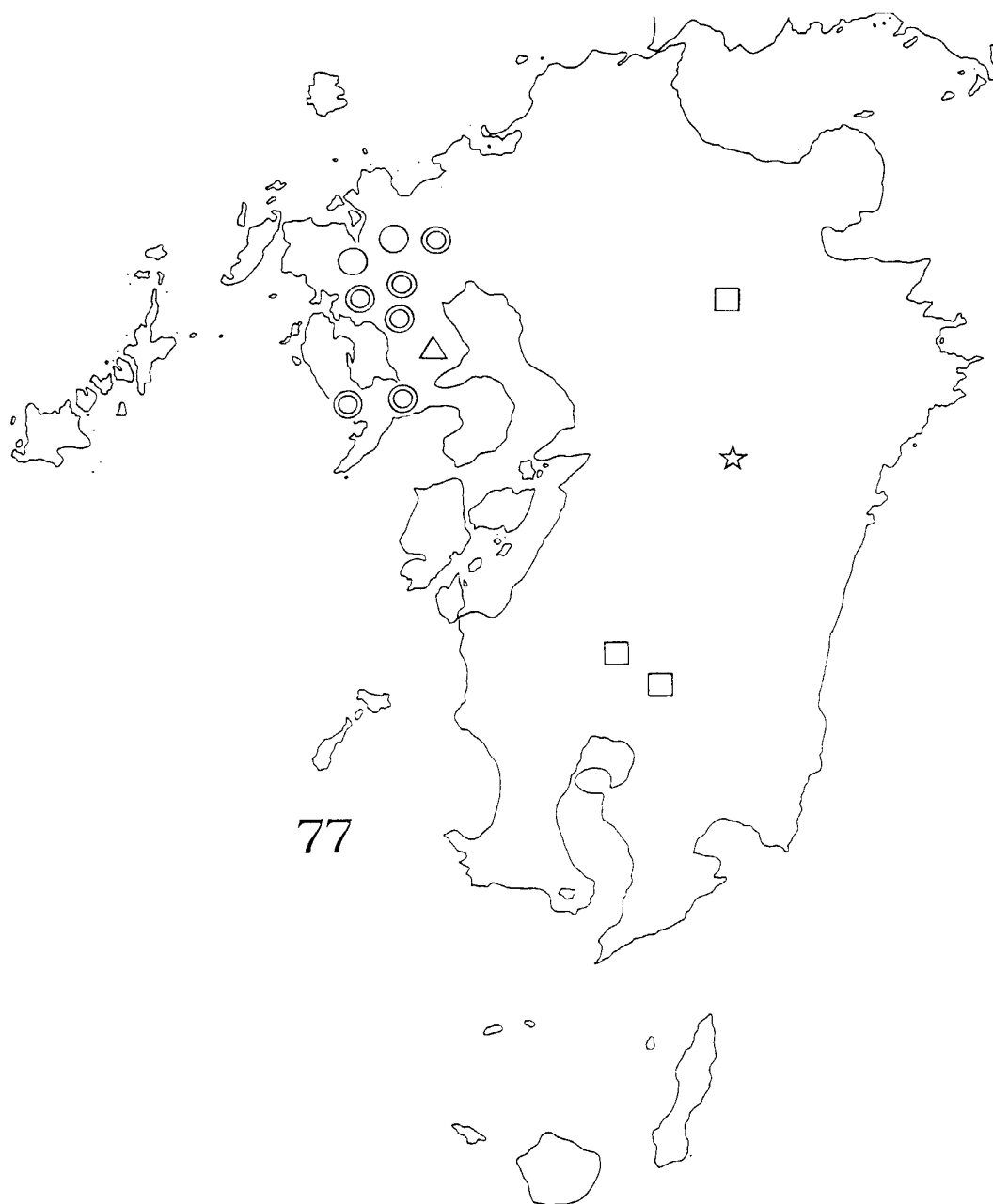


Fig. 77. Distribution of subgenus *Neoceble* in Kyushu, I. ○: *Agathidium* (*Neoceble*) *derispioides*; △: *A. (N.) piceolum*; ⊙: *A. (N.) omogoense yamaokai*; □: *A. (N.) naturale*; ☆: *A. (N.) kyotoense*.

Mt. Kurodake, Oita Pref., Kyushu, 24-VII-1996, T. Ueno leg.; 1♂, Mt. Kurodake, Oita Pref., Kyushu, 9-VI-1999, H. Hoshina leg.; 2♂♂, 5♀♀, Mt. Iwaguro, Ehime Pref., Shikoku, 12-VI-1997, H. Hoshina leg.; 1♂, 2♀♀, Mt. Iwaguro, Ehime Pref., Shikoku, 8-VIII-1998, H. Hoshina leg.; 1♀, Mt. Minamimatayama, Mie Pref., Honshu, 11-IV-1996, A. Amagasu leg.; 1 specimen, Chichigatani, Miyagawa-mura, Mie Pref., Honshu, 7-VIII-1988, N. Narukawa leg.; 1♀, Kamiyama, Hakone, Kanagawa Pref., Honshu, 25-V-1980, Y. Hirano leg.

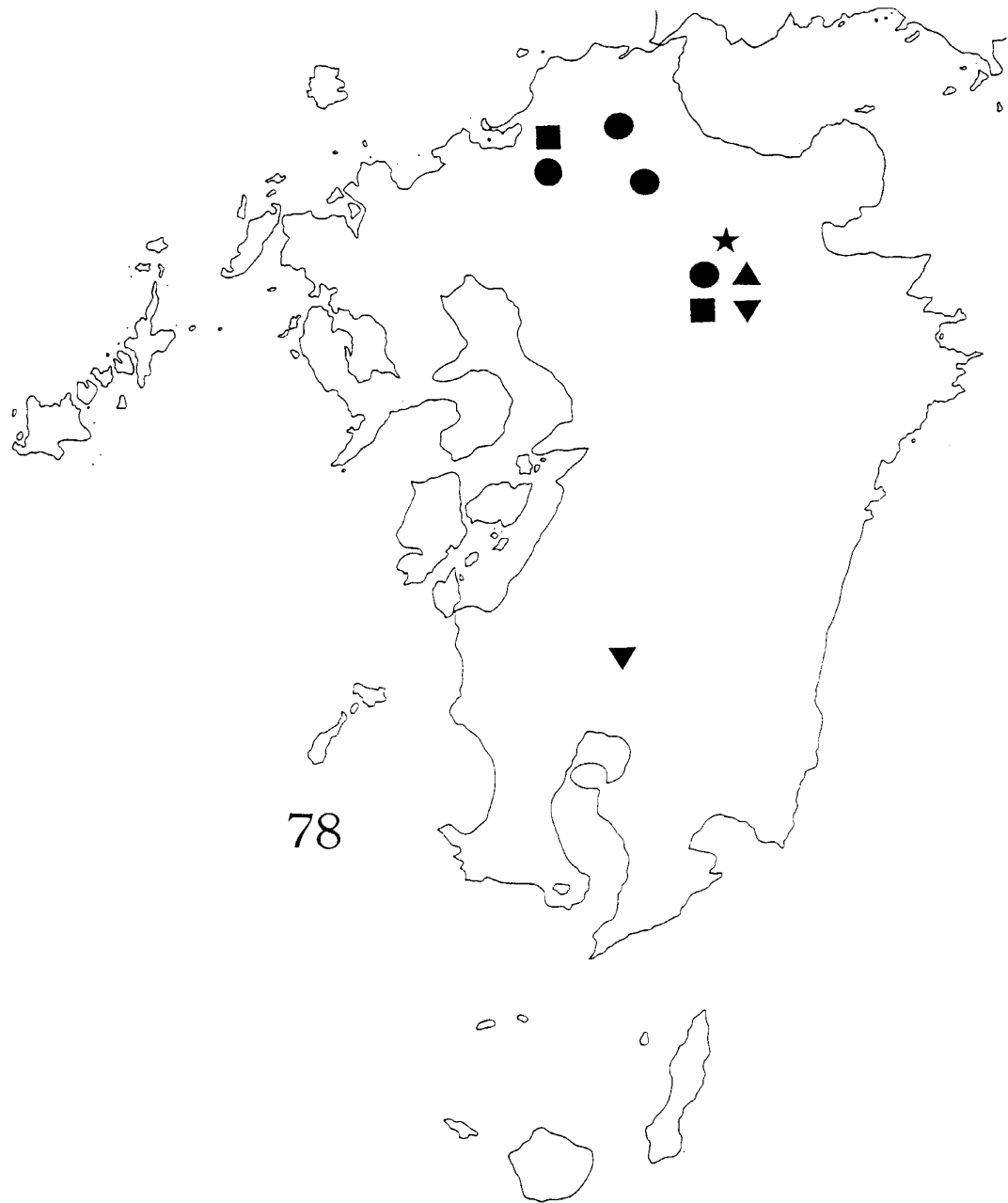


Fig. 78. Distribution of subgenus *Neoceble* in Kyushu, II. ▲: *Agathidium (Neoceble) multitorum*; ■: *A. (N.) aenum*; ▼: *A. (N.) longicorne*; ●: *A. (N.) cribratum*; ★: *A. (N.) dubium*.

Remarks. The genus *Agathidium* has the antennae with segments 7, 9, and 10 almost symmetrical, whereas the genus *Anisotoma* has these antennal segments extremely expanded inward. I examined the holotypes of the two nominal species *Agathidium (Neoceble) dubium* and *Anisotoma japonica* and found that both of them have the antennae displaying the characteristics of *Agathidium*. In addition, other features (for example, coloration, length, and punctures on dorsum), indicate that they are conspecific. Therefore, *Anisotoma japonica* is regarded as a junior synonym of *Agathidium (Neoceble) dubium*.

This species was collected for the first time from Kyushu and Shikoku, being previously known from Honshu. The specimens that I collected were caught in the deciduous forest by beating.

Key to Species of the Subgenus *Neoceble* in Kyushu

1. Dorsum clearly bicolorous (Figs 1-2)
 *Agathidium (Neoceble) derispioides* Nakane
 Dorsum almost concolorous 2
2. Hind wings absent 3
 Hind wings normal 5
3. Third segment of antenna about 0.6 times as long as second (Fig. 30); apex of
 aedeagus simply round in ventral view (Fig. 56)
 *A. (N.) piceolum* Hlisnikovský
 Third segment of antenna almost as long as or a little longer than second (Figs
 31-32); apex of aedeagus abruptly narrowing in ventral view (Figs 57, 59) ···
 4
4. Body length about 1.7-1.9 mm; sutural stria absent; both mandibles almost of
 the same size or the left one slightly larger; aedeagus relatively slender in
 ventral view (Fig. 57) *A. (N.) naturale* sp. nov.
 Body length about 2.2-2.6 mm; sutural stria distinct or indistinct; male left
 mandible sometimes erected apically as a horn (Figs 24-25); aedeagus rela-
 tively thick in ventral view (Fig. 59)
 *A. (N.) omogoense yamaokai* subsp. nov.
5. Body length about 1.5-1.8 mm; tarsal formula 4-4-4 in both sexes
 *A. (N.) kyotoense* Angelini and De Marzo
 Body length longer than 2 mm; tarsal formula 5-5-4 in male, 5-4-4 or 4-4-4 in fe-
 male 6
6. Head relatively wide, 0.66-0.67 times as wide as pronotum (Figs 11, 14) 7
 Head relatively narrow, 0.53-0.56 times as wide as pronotum (Figs 16, 18, 20) ···
 8
7. Third segment of antenna about 1.8 times as long as second; tarsal formula 5-5-4
 in male, 5-4-4 in female; apical margin of aedeagus almost straight in ven-
 tral view (Fig. 62) *A. (N.) multitodum* sp. nov.
 Third segment of antenna about 1.2 times as long as second; tarsal formula 5-5-4
 in male, 4-4-4 in female; apical margin of aedeagus slightly sinuate in ven-
 tral view (Fig. 63) *A. (N.) aeneum* Angelini and De Marzo
8. Seventh segment of antenna longer than wide (Fig. 36); pronotum almost as
 wide as elytra, without microsculptures *A. (N.) longicorne* Portevin
 Seventh segment of antenna shorter than wide (Figs 37-38); pronotum narrower
 than elytra, with weak or strong microsculptures 9
9. Elytron relatively gradually becoming thinner from basal 1/3 toward apex
 (Fig. 18); aedeagus with small protuberance apically in ventral view (Fig.
 65) *A. (N.) cribratum* Portevin
 Elytron relatively sharply becoming thinner from basal 1/4 toward apex (Fig.
 20); aedeagus simply rounded apically (Fig. 66) ··· *A. (N.) dubium* Portevin

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